

University of Dundee

## DOCTOR OF PHILOSOPHY

An Analysis of Employees' Reactions to the Introduction of ERP Systems in Management Accounting  
**Case Studies from Saudi Arabia**

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School of Business

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An Analysis of Employees' Reactions to the Introduction of ERP  
Systems in Management Accounting: Case Studies from Saudi Arabia

Ahmed Mubarak Alrajeh

A Thesis Submitted to the University of Dundee in Fulfilment of the  
Requirements for the Degree of Doctor of Philosophy.

School of Business  
The University of Dundee  
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United Kingdom

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## **Dedication**

For my parents, my wife Norah, my son Abdulaziz, my daughter Lamar, my brother Abdullah and my friend Abdulrahman Althani.

Thank you all for your love and support.

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## **Explanation of Terms and Abbreviations used in my thesis**

BSC- Blanced Scorecard

ERP- Enterprise Resource Planning

SAP- Systems Applications and Products

LDCs- Less Developed Countries

DCs- Developed Countries

UK- United Kingdom

NIS- New Institutional Sociology

OIE- Old Institutional Economics

NIE- New Institutional Economics

ST- Structuration Theory

C1- Company 1

C2- Company 2

M- Manager

FM- Finance Manager

Acc- Accounting

Man- Management

Eng- Engineer

Com- Computer

Mar- Marketing

DERP2- Director of Enterprise Resource Planning

DCM2- Director of Change Management

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My thesis was a lot of blood, sweat and tears and an experience that has changed my life forever, and has opened my eyes and given me a lot of strength and courage, belief in myself and in my work and has opened many doors. I learned a lot from my PhD experience. Again, I thank my supervisors Dr Anne and Dr Lissa for their belief in me and trust in my choices of research. That gave me a lot of confidence in my abilities which I do not think I had appreciated up until this point.

So thanks to Dundee University and my sponsor Al-Imam University, my life will never be the same again. I loved working with everybody that I worked with on my thesis.

## Declaration

I hereby declare that I am the author of this thesis; that the work of which this thesis is a record has been done by me, and that it has not previously been accepted for a higher degree.

Signed:.....

Date:.....

Ahmed Mubarak Alrajeh

## Certificate

We certify that **Ahmed Mubarak Alrajeh** has worked the equivalent of ten terms on this research, and that the conditions of the relevant ordinance and regulations have been fulfilled.

Signed:.....

Date:.....

Dr. Anne Fearfull

Signed:.....

Date:.....

Dr. Elizabeth Monk

## **Abstract**

Many studies report a gap in the inter-relationships between different factors and the acceptance of, or resistance to, an ERP system. Specifically, there is lack of literature on the individual factors that drive or delay the adoption of advanced technologies such as the Enterprise Resource Planning system ERP. It motivated me to carry out a study that investigates the non-linear views of change, in order to provide a general picture of how external and internal factors influence employees to accept or reject an ERP system. My thesis explores individual choices and behaviours and the socio-cultural context in which the cases are set to identify the factors that influence individuals' actions and to determine from an employee perspective whether reactions to using ERP systems are intentional or unintentional.

The thesis follows an interpretive approach using two case studies in Saudi Arabia where multiple sources of evidence including interviews, document analysis and observation have been employed. Pattern matching, logic models and cross-case synthesis are used for thematically organising and analysing the case studies.

The thesis discusses the relationship between factors including politics, economics, religious social culture, the culture of the company and technical issues and the behaviour of employees towards change. I will argue that those factors directly affect the behaviour of employees and indirectly affect the acceptance or rejection of the ERP system.

The thesis extends the scope of institutional analysis by explaining how the behaviours of employees influence both the acceptance of, or resistance to, an ERP system. The thesis adds to the knowledge in the literature by showing the relationship between external and internal factors and the acceptance of, or resistance to, an ERP system in Saudi

Arabia as less developed countries LDCs. Also the thesis shows how the effects of the socio-cultural landscape of the middle east cannot be ignored when exploring the factors that initiate and shape management accounting change.

Practical implications: the thesis provides some examples on how external and internal factors influence the behaviour of employees in Saudi Arabia. The thesis suggests that companies can exploit the behaviour of employees to influence change and avoid resistance.

## **Declaration**

Publications and public presentations developed on the basis of my thesis:

Scottish Doctoral Management Conference (SDMC) 2010. University of St Andrews, St Andrews, UK. On 27-28.5.2010.

BAFA Doctoral Colloquium 2011, Aston Business School, Birmingham, UK. On 11-12.4.2011

7th Scottish Doctoral Management Conference, University of St Andrews. St Andrews, UK. On 26-27.5.2011.

The 15th Annual Scottish Doctoral Colloquium (SCOTDOC) 2011, University of Edinburgh, UK. On 7.6.2011.

The 48th Annual Conference and the Annual Doctoral Colloquium, Brighton, UK, On 16-19.4.2012.

Scottish Doctoral Colloquium in Accounting and Finance (ScotDoc), University of Strathclyde Business School, UK. On 14-15.6. 2012.

British Accounting and Finance Association Scottish Area Group Annual Conference, 2012, The University of Strathclyde. UK. On 31.8.2012

British Accounting and Finance Association Accounting and Finance in Emerging Economies SIG (BAFA AFEE SIG) 8th Workshop Programme, University of Salford, UK. On 13.9.2012

Best Poster Award at the PhD Journey Conference 2012. On 6-7.11.2012 Available at:[http://www.academia.edu/2008688/The\\_PhD\\_Journey\\_Conference\\_2012\\_Alrajeh\\_Fearfull\\_and\\_Monk](http://www.academia.edu/2008688/The_PhD_Journey_Conference_2012_Alrajeh_Fearfull_and_Monk)

Scottish Doctoral Colloquium in Accounting and Finance (ScotDoc), Dundee University, UK. On 23.5.2013.

Glasgow PhD workshop on Paradigms & Frameworks 2013, Glasgow University, UK. On 3-4.12.2013.

The Centre for Environmental Change and Human Resilience (CECHR) Annual Symposium. University of Dundee. UK. On 5.2.2014.

## **Conference papers:**

Martin Quinn, Gerhard Kristandl, Orla Feeney, Ahmed Alrajeh, Garvan Whelan, Ruth Mattimoe (2013), "Researching information technology and management accounting change – some researchers' thoughts", the 9th European Network for Research in Organisational & Accounting Change conference ENROAC, Jyväskylä, Finland on June 5-7, 2013.

Available at: [imarn.org/2013/01/28/management-accounting-change-and-information-technology-some-researchers-thoughts/](http://imarn.org/2013/01/28/management-accounting-change-and-information-technology-some-researchers-thoughts/)

Alrajeh, Ahmed, Fearfull, Anne, & Monk, Elizabeth. (2014). "The role of stable behaviour patterns in management accounting change". Paper presented at the 7th Saudi Students Scientific Conference 2014, 1-2.2.2014, University of Edinburgh, UK.



# **Chapter 1: Introduction**

## **1.1.Introduction**

This chapter provides an introduction to my thesis and shows its structure and the design selected to guide this research.

My thesis presents the results of two case studies, conducted in Saudi Arabia, in which attempts have been made to implement Enterprise Resource Planning systems (ERP) to the management accounting function. It will show that the reasons for employees using or rejecting the ERP system has to do with external factors, such as politics, economy, social culture, religion; and internal factors within the company, such as the culture of the company and the advantages and limitations of the ERP system as seen by employees.

In particular, my thesis explores whether those factors are directly linked to acceptance of, or resistance to, an ERP system; or whether they are interrelated. My thesis will show that those factors are interrelated and that a particular factor could lead some employees to use the ERP system but for others, employees are rejecting the change. More particularly, my thesis uses critical insights from the Burns and Scapens' (2000) framework to explain how those external and internal factors influence the behaviour of employees and how the behaviour of employees leads to acceptance or rejection of the use of the ERP system.

My thesis explores the factors that influence the employee to accept or reject the ERP system, and it explores the impact of change management practices and procedures in the implementation of the ERP system. It also explores the factors that change management systems have no control of. The exploration of these factors is important

for any study of the success or failure of the implementation of an ERP system in organisations which are similar to a Saudi business environment.

## **1.2.The importance of the subject of the study**

According to Arnold (2006) ERP has been implemented by firms because it is said to improve organisational efficiency, effectiveness, and performance. However, many researchers (for example, Al-Mashari et al., 2003; and Foster et al., 2009) showed that a high percentage of ERP projects failed. Foster, Hawking and Zhu (2009) found that 75% of organisational change efforts involving technology fail as a result of people's negative reactions to changes in their work practices, organisational business processes and in the use of the technology, leading people to resist the change.

Many studies (for example, Scapens and Jazayeri, 2003; Ribeiro, 2003; Al-Mudimigh, Zairi and Al-Mashari, 2001 and Al-Turkia, 2011) paid attention to factors such as ERP systems that influence the change inside organisations. Moreover, many studies identify different causes of change. These studies include, for example, Busco, Riccaboni and Scapens (2006) and Nor-Aziah and Scapens (2007) on trust; Busco et al. (2007) and Sharma, Lawrence and Lowe (2010) on agency; Yazdifar, Zaman, Tsamenyi and Askarany (2008) on the need to include power politics and social culture.

However, other contributors call for more studies on the relationships between factors, for example, Sulaiman (2003); Wickramasinghe and Hopper (2005); Ribeiro and Scapens (2006); Bezuidenhout and Crombie (2009); Ngai, et al. (2008). Those studies suggested the interrelationship between these factors, such as economic and cultural factors must be included in management accounting research, rather than their being regarded simply as factors to consider on a stand-alone basis, as though they are not affected by other existing factors.

Busco, Quattrone and Riccaboni (2006) indicate that for understanding the issue of change, reconceptualising change is not necessarily needed, but they suggest that there is a need to explore a new view that links non-linear views of change together. To date, there has been a lack of studies doing that.

According to Wickramasinghe and Alawattage (2007) contingency and agency theories have contended that the relationships between organisational factors and management accounting practices are linear. Nevertheless, Ribeiro (2003) illustrates that the concept of the relationship between management accounting and specific contingencies is largely based on functionalist principles (Ribeiro, 2003). Such views suggest that there is a need for an interpretive approach where insights come from employees. Employees can explain, from personal experience, how different factors interact with each other.

All of the above have motivated me to carry out a study that investigates the non-linear views of change, in order to provide a general picture of how external and internal factors influence employees to accept or reject an ERP system.

### **1.3.The objective of the thesis**

In examining the reaction of employees to attempts to implement change through the introduction of ERP systems, my thesis increases our knowledge of agency by making use of literature on change from the wider management discipline. My thesis extends the work of management accounting theorists who aim to develop a processual view of change (Burns and Scapens, 2000, Sharma et al., 2010, Busco et al., 2006) by taking a wider perspective.

My thesis examines the impact of employee attitudes and behaviour on the implementation of Enterprise Resource Planning (ERP) in order to understand how smooth implementation or resistance happens. Based on 1<sup>st</sup> empirical work (in Chapter 7) and 2<sup>nd</sup> empirical work (in Chapter 8), my thesis extends Burns and Scapens' (2000) framework (in Chapter 9) by showing the employees' experiences of the external and internal aspects in the context of the implementation of ERP in Saudi Arabia.

My findings explain the micro-processes that link various elements of the implementation of ERP to elements of repeated behaviour patterns, change and resistance. My findings also show how the repeated behaviour patterns of employees' "routines" play an important role in regard to both effective change and resistance. When routines are seen as behaviour patterns that generate employee action, My findings allows one to begin to understand the micro-dynamics of the effect of external and internal aspects on the implementation of ERP and, consequently, to take a step towards explaining one of the great current challenges in management accounting literature – the question of whether or how to introduce management accounting change.

Burns and Scapens' (2000) framework focuses on management accounting systems but it only explains why employees resist new systems. However, my thesis extends Burns and Scapens' (2000) framework by including the role of the behaviour of employees, in order to explain how the behaviour of employees can influence both the acceptance of, and the resistance to, an ERP system. The behaviour of employees is influenced by many external and internal factors. However, change management cannot control those factors. My thesis shows that change managers, as experts inside organisations, can exploit the behaviour of employees to influence the degree to which they would either accept or resist an ERP system.

Senior managers, practitioners and scholars can benefit from better understanding the power of the behaviour of employees and how the behaviour of employees can be exploited to influence both acceptance of, or resistance to, an ERP system.

The objectives noted above could be expressed in the form of the following research questions:

(i) What is the importance of employee agency, and what personal and environmental influences are there, in effecting the implementation of a new ERP system?

(ii) How do individual agents bring about institutional change?

#### **1.4.The structure of the thesis**

Saunders, Lewis and Thornhill (2009) indicate that the general structure for a project report may differ according to the research approach adopted. A structure that fits the deductive approach could be: Abstract, Introduction, Literature review, Method, Results, Discussion, Conclusions, References and Appendices. Chandrasekhar (2002) suggested the same structure.

However, in the inductive approach the structure of the report could be different. For example, my thesis can be structured in order to tell a story. Thus, the early part of the report explains the conclusions of my thesis and may include a clear explanation of how this story relates to the existing literature. The next part could be a detailed explanation of how you arrived at these conclusions. Saunders et al. (2009) indicated two reasons for using an inductive approach. First it generates a direction for further

work by conducting an exploratory project. Second, the scope of the research may be forced by adopting restrictive theoretical propositions that do not reflect the participants' views and experiences. Therefore, an inductive approach allows some flexibility to both the research design and its presentation.

My thesis does not use either the purely deductive or inductive approach, but rather it uses an abductive approach in which the case and the theoretical framework evolve through time. Dubois and Gadde (2002) use an abductive research strategy. They indicate that the investigator continually reviews his/her analytical framework by moving from empirical material to theory and then back again. My design does not follow a purely deductive or inductive approach, but it uses an abductive approach where I placed induction and deduction in a complementary rather than competitive context. Figure 5.4 Research design in Chapter 5 illustrates the process of the research. Also, Appendix 4.1: The Poster in the Research Process explains the stages of my research process.

In short, I reviewed the literature and conducted the 1<sup>st</sup> empirical work to test and extend the Burns and Scapens' (2000) framework, since that has been the predominant framework used in the area of change within management accounting. Then I reviewed the literature again to revisit and discuss the factors that I found in the 1<sup>st</sup> empirical work, and to develop my research questions. Finally, I conducted the second empirical work to gather more evidence about the acceptance of, or resistance to, an ERP system. Therefore, the research process is flexible to allow change to the direction of my thesis.

Having conducted my research in the manner outlined above, my thesis consists of nine chapters. Chapter 2 explores the environmental context of Saudi Arabia. It

describes the work environment of Saudi Arabia on a macro level, including the nature of the economic and political environments, social culture, religion and accounting education in Saudi Arabia.

Chapter 3 provides the literature review for the study, including management accounting change, organisational change, approaches to the study of change and factors that influence the behaviour of individuals in general. The objective of the literature review conducted for my study was to identify the factors that influence employees to accept or resist the ERP system. Thus, it highlights the importance of agency, the behaviour of employees and the factors that influence the behaviour of employees. It then identifies the gap in the literature by focusing on causes of the behaviour (for instance, the influence of the environment) rather than on the behaviour *per se*, in order to explain how the behaviour of employees can influence both the acceptance of, and the resistance to, an ERP system. The chapter closes with my preliminary research questions.

Because the introduction of ERP systems has been part of a movement to change work within many organisations/institutions in regard to management accounting, Chapter 4 discusses the main Institutional Theories. It investigates the external context of causes influencing change, undertaken within and amongst institutions notably: New Institutional Economics (NIE), New Institutional Sociology (NIS) and Old Institutional Economics (OIE). It then discusses the internal context of causes of change, using in particular Burns and Scapens' (2000) framework, addressing its importance, its features, its weaknesses, strengths and its development. The chapter further extends Burns and Scapens' (2000) framework by focusing on the influence of the behaviour of employees to explain the acceptance of, or resistance to, an ERP system.

The aim of Chapter 5 is to develop a philosophically and methodologically sound foundation for addressing and answering my research questions. It reflects first, my ontological, and epistemological assumptions and the methodology for my study. It then, discusses the abductive approach that is used in my thesis, going on to explain the method and techniques that I used to collect and analyse data.

Chapter 6 describes two case companies. Chapter 7 explores the micro context of change using two case studies in Saudi Arabia. Chapter 7 chapter presents my 1<sup>st</sup> empirical work, which aimed to evaluate the feasibility of the preliminary research question (developed in Chapter 3). It focuses on (i) why the change (introduction of ERP) happened, with particular reference to the socio-economic and socio-cultural contexts, and (ii) which factors might threaten to compromise change and lead to resistance to such change in management accounting.

Chapter 7 discusses the findings of the 1<sup>st</sup> empirical work. After the 1<sup>st</sup> empirical work, it became clear to me that the behaviour of employees is the main element that explains successful change or resistance. That recognition represents a finding in itself, since the predominant Burns and Scapens (2000) framework gave little if any consideration to the aspect of employee agency and behaviour in the context and result of strategies for change. It is my contention that acceptance of, or resistance to, a new system could be intentional or unintentional. Therefore, exploring the behaviour of employees and the factors that influence these elements is important in particular, to understand why acceptance or resistance happens. Employees are influenced by many external and internal factors and only employees can tell which of these factors actually influence their acceptance of, or resistance to, an ERP system.



According to the results of my 1<sup>st</sup> empirical work, I reformulated my research questions to take the following shape: (i) What is the importance of employee agency, and what personal and environmental influences are there, in effecting the implementation of a new ERP system? (ii) How do individual agents bring about institutional change?

Chapter 8 presents my 2<sup>nd</sup> empirical work. It shows the results of the analysis of the data generated through the more extensive work conducted in the same way using two case studies in Saudi Arabia. It shows that the behaviours of employees play an important part in explaining acceptance or rejection of the ERP system.

Chapter 9 concludes my thesis. It provides a summary of the main points in the research process. First, it shows the development of my research question. Second, it summarises the results and the main contributions of my thesis. Third, it states the limitations of my thesis. Finally, it explains the implications of my findings and makes suggestions for future research.

## **1.5.Conclusion**

This chapter has presented a summary of the work reported and examined in my thesis. It shows the motives, research questions and objectives of the study. Also, it shows my research design. A detailed explanation of the study will be given in subsequent chapters, while the next chapter discusses the Saudi Environmental Context.

## **Chapter 2: Saudi Environmental Context**

### **2.1.Introduction**

The working environment including politics, economics, religion and social culture within any country could have huge influence not only on organisations but also individuals within organisations. However, the working environment could fundamentally differ from one country to another. Thus it is perhaps useful to describe in detail the working environment in Saudi Arabia; in doing so I will comment on the potential impact of such circumstances on the likely success or otherwise of the introduction of change, such as brought by the ERP system. It is not enough to study the influence of the different aspects separately, since they are related to each other. Wickramasinghe and Hopper (2005) stress that social culture and politics are related and should be studied together.

This chapter describes the work environment of Saudi Arabia, including the nature of the social, economic and political environment, religion and social culture, because it is the location in which my study has been conducted. Because my participants work in the area of management accounting, I also outline the nature of accounting education in Saudi Arabia. The objective of exploring those aspects is important for explaining their influence, if any, on acceptance of, or resistance to, using an Enterprise Resource Planning system.

### **2.2.Background to Saudi Arabia**

The official name of Saudi Arabia is Al-Mamlaka Al-Arabiya As-Saudiya (the Kingdom of Saudi Arabia). The country, as it is known in the world, came into being in 1932. There are specific reasons why Saudi Arabia is important on the world stage. First, it is the birthplace of the Prophet Mohammad (peace be upon him) and it has the

two most holy cities for Muslims: Makkah and Medina. Saudi Arabia also has significant economic power as it has 20% of the world's oil reserves.

Saudi Arabia is located in the far south-west of Asia, and is a large country of 2,250,000 square kilometres. Figure 2.1 shows a map of Saudi Arabia's 13 provinces: Al-Baha, Al-Jouf, Asir, Eastern, Hail, Jizan, Madinah, Makkah, Najran, Northern Border, Qasim, Riyadh and Tabouk (SAMIRAD, 2010). The 13 provinces came into being on 2<sup>nd</sup> of March 1992 (CDSI, 2010). The country's capital city is Riyadh. The population of Riyadh is nearly 4.26 million (SAMIRAD, 2010).

**Figure 2.1 Map of the Kingdom of Saudi Arabia**



Source: (Ezilon, 2010)

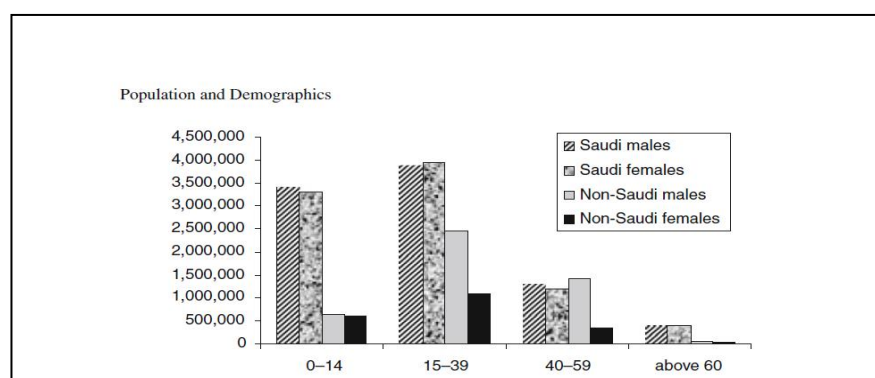
Table 2.1 shows the Saudi population by age and nationality. It was nearly 25.8 million in 2009, which includes 72.9% Saudis and 27.1% non-Saudis. Islam is the main religion of Saudi Arabia and Arabic is the official language. However, English is the main language for business and is used widely in the Arabian Gulf region. The currency of Saudi Arabia is the Saudi riyal, but when I refer to monetary values in my thesis, I will do so in pounds sterling (£).

**Table 2.1 Population by age**

Population by Age	Unit	2004			2008p		
	(1000)	Saudis	Non-Saudis	Total	Saudis	Non-Saudis	Total
0 - 14		6,598.0	1,188.3	7,786.3	6,674.1	1,328.3	8,002.4
15 - 39		6,996.0	3,463.2	10,459.2	7,850.4	3,532.9	11,383.3
40 - 64		2,357.6	1,442.5	3,800.1	2,966.1	1,762.3	4,728.4
65 & over		575.8	56.9	632.7	625.0	68.2	693.2
Total:		16,527.4	6,150.9	22,678.3	18,115.6	6,691.7	24,807.3

Source: Central Department of Statistics and Information, (Ministry of Economy and Planning, 2009, p. 1)

Figure 2.2 shows the demographics of Saudi Arabia which are centralized on the age group 40 years and under, and this percentage represents 78% of the Saudi population or 19.4 million people. Therefore, Saudi Arabia can be characterized as ‘young’ in terms of its population structure (Ramady, 2010). However, this does not mean that Saudis are an active part of the labour force to any significant degree, indeed the opposite is the case; see section (2.5.2. Saudi labour market), in that 97% of the number of people who are of working age do not work (Ministry of Labour, 2010).

**Figure 2.2 Saudi Arabia’s population by age groups, gender and nationality (2008)**

Source: SAMA by (Ramady, 2010, p. 353)

## 2.3.Social and Cultural Influences

### 2.3.1. Start of Islam

The Arabic word ‘Islam’ simply means ‘submission’. However, in a religious context it means complete submission to the will of God (Royal Embassy of Saudi Arabia in the United States, 2010).

Islamic scholars in Saudi Arabia contend that the people in Makah at the time of the Prophet Muhammad were heathens. This was because they practised idolatry by worshipping statues rather than God and Muhammad’s role was to call people to worship God alone (Jabrin, 2010). Muslims believe in a chain of prophets starting with Adam and including: Noah, Abraham, Ishmael, Isaac, Jacob, Joseph, Job, Moses, Aaron, David, Solomon, Elias, Jonah, John the Baptist and Jesus (peace be upon them). For Muslims, Muhammad is the last of the prophets.

Muslims believe, as stated in the Qur’an, that the words of God were sent through the Angel Gabriel to the Prophet Muhammad, who in turn told them to his companions. Muhammad started preaching Islam when he was 40 years old. Mohammed was an uneducated person and did not know how to read and write. The main references in the Islamic religion are Quran and Sunnah which is referred to in Arabic as *hadith*. Sunnah and hadith are not the same:

“*Sunnah* literally means a way, manner or conduct, and technically refers to the statements and actions of the Prophet Muhammad. *Hadith* literally means news, report or narration, and technically refers to the narrations about the Prophet’s words, actions and his characteristics.” (Rane, 2010, p. 79)

The Prophet taught about how important it is for people to show respect to all things and this conceptualisation of universal respect is a central tenet of Islam:

“A man walking along a path felt very thirsty. Reaching a well he descended into it, drank his fill and came up. Then he saw a dog with its tongue hanging out, trying to lick up mud to quench its thirst. The man saw that the dog was feeling the same thirst as he had felt so he went down into the well again and filled his shoe with water and gave the dog a drink. God forgave his sins for this action. The Prophet was asked: ‘Messenger of God, are we rewarded for kindness towards animals?’ He said, ‘There is a reward for kindness to every living thing.’” (Saheeh Muslim No. 2244, and Saheeh Al-Bukhari No. 2466, Cited in Royal Embassy of Saudi Arabia in the United States, 2010).

### **2.3.2. Religion of Islam and the world**

Although Islam has been mainly associated with the Middle East and the Arabs, the largest Islamic country in terms of population, is outside the Middle East and is Indonesia, which has 209 million Muslims. The number of Muslims in 2009 was 1.57 billion, representing 23% of an estimated 2009 world population of 6.8 billion. More than 60% of the world’s Muslim population is in Asia with about 20% being in the Middle East and North Africa. However, the Middle East and North Africa have the highest proportion of Muslim-majority countries. More than 300 million Muslims, or 20% of the population of Muslims in the world, live in countries where Islam is not the religion of the majority. Nevertheless, these minority Muslim populations are often significant. India for example, has the third-largest population of Muslims in the world. The total Muslim population in the world is divided into two parts: about 90% are Sunni Muslims and 10% are Shia Muslims. Most of the Shias, between 68% and 80%, live in just four countries: Iran, Pakistan, India and Iraq. Figure 2.3 shows that Saudi Arabia represents only 2% of the population of Muslims in the world (Cooperman et al., 2009).

**Figure 2.3 Distribution of Muslim population by country and territory**



Source: (Cooperman et al., 2009)

### **2.3.3. Islam and Saudi Arabia**

The Islamic religion which began 1400 years ago in Arabia has played a major role in the history of Saudi Arabia and its political, economic and social development. It has also played a role in the daily life and habits of a Muslim. Saudi Arabia was founded by King Abdulaziz in 1932; at that time education was only provided through religious schools. However, while the religion of Islam, and its influence over social culture, traditions and customs, continues to play a major role in the further emergence and development of the Kingdom of Saudi Arabia, there is one aspect of Saudi society that has not followed Islam. For example, the social gradients, or classes, are based on ethnic or tribal allegiances present in Saudi Arabia. However, the religion of Islam did not follow social gradients. As stated in the Quran:

“O mankind! We created you from a single (pair) of a male and a female, and made you into nations and tribes, that ye may know each other (not that ye may despise (each other). Verily the most honoured of you in the sight of Allah is (he who is) the most righteous of you. And Allah has full knowledge and is well acquainted (with all things).” (Qur’an 49:13; (Al-Hujrat, verse 13 according to Yusuf Ali’s interpretation, p. 294)

The most important Arab values are related to family security, family harmony, parental guidance, age, authority, compromise, devotion, patience, indirectness and hospitality (Hodgetts and Luthans, 1997, p. 97, as cited in Baumann, 2007). In his study Baumann (2007) aimed to analyse many primary aspects concerning cultural habits in the Arab world. He found the Arab attitude is not directly influenced by religion, but that specific cultural values and beliefs have evolved throughout the past, and these are not religious, but rather humane in nature.

Both social culture and religion affect the behaviour of the Arab. Nonetheless, there are positive cultural habits emphasised by Islam such as hospitality, but there are, arguably, negative habits Islam forbids such as not punishing a nobleman who steals:

“It was narrated from Aishah (RA) that Quraish were concerned about the case of Makhzumi woman who had stolen. They said, “Who will speak to Allah’s Messenger (PBUH) concerning her?” Then they said, “Who would dare to do that but Usamah, the beloved of Allah’s Messenger (PBUH)?” So Usamah spoke to him, and Allah’s Messenger (PBUH) said, “Are you interceding about one of the *Hadd* punishments of Allah?” Then he stood up and delivered a speech in which he said, “O people, those who came before you were doomed because if a nobleman among them stole, they let him off, but if a lowly person stole, they carried out the punishment on him. By Allah, if Fatimah, the daughter of Muhammad, were to steal, I would cut off her hand.” (Hadith No. 6788, Book of Al-Hudud, Sahih Bukhari, Vol. 8, cited in Quran and hadith).

Religion has an impact on employees’ behaviour with each other. The behaviour of individuals is influenced by Mosques. The case companies had Mosques (See Chapter 6). It is normal practice in Saudi Arabia. Moreover, groups could also influence the behaviour of individuals, and this is important in the context of my study because those influences could lead to either acceptance of, or resistance to, an ERP system. Understanding those influences is important to managing change inside organisations where employees are influenced differently by different aspects.



### **2.3.4. Islam and employees**

Other studies discuss the influences that affect employees in Arabian countries. From a religious point of view, in terms of the impact on the individual, Alomar (1999, p. 60) indicates that Islamic law focuses on the same matters as the (Western) bureaucratic system does. Alomar (1999) illustrates how the bureaucratic system focuses on adherence to and respect for rules, good governance and social control, and the gradient of the authorities. However, Islamic law adds the important principles of the self-censorship of the individual, promoting justice and moral order and linking all these things to God.

Alomar (1999, p. 94) confirms that formal moral support does not exist in Islamic countries. This may be caused by the fact there is much reliance in the preparation of ethical guidelines on religion in the Muslim community. Alomar (1999, p. 63) argues that the lack of Islamic moral preparation of staff is the reason why many negative phenomena, such as bribery and corruption and a lack of work ethic, exist. Alomar (1999) indicates that the problem is caused in the Islamic world by people not following the Islamic principles appropriately. Separation of the Islamic principles in business application may be one of the most important reasons for the emergence of many of the negative aspects.

As a result, poorly formed ethics leading to, for example, administrative corruption, the lack of dedication to the responsibilities of the job and the misuse of power (Alomar, 1999, p. 73) could be seen as problematic in the contemporary Saudi work place. Thus it could be argued that Arabic society is going through a transition, a transition from a family and tribe-oriented society to one in which the state and community of democratic systems are prominent (Alomar, 1999, p. 73).

My thesis will demonstrate elements of this transitory state as I examine my data showing the differences in behaviour even within the public organisation. The recognition of such differences, I contend, allows me to better explore which types of change might be embraced or resisted.

### **2.3.5. Social culture and IT**

Statistically, the information technology (IT) market of Saudi Arabia is growing rapidly. IT spending reached £2.4 billion in 2006 and £4.6 billion in 2010 and is expected to grow by 10.2% year on year from 2011 (CITC, 2010). This rapid growth, fuelled mostly by increased spending on hardware and IT services, will take IT spending to £7.8 billion in 2015 (CITC, 2010). The Saudi Arabian IT services market was approximately £658 million in 2010 (BMI, 2010). Narayan (2009) indicated that the Middle East is one of the fastest growing ICT markets worldwide.

There is some evidence that social culture affects the use of IT. There are negative consequences as a result of the implementation of new technology and the speed with which this is happening, including the fact that companies face the threat of unauthorized staff having greater access to information which is classified. Abu-Musa (2005) confirms that it is not possible to know whether the cause of such a potential problem is accidental or deliberate. The consequences, however, are the destroying of data, introduction of computer viruses and sharing of passwords, for example to allow unauthorized employees to see documents and/or share information with other unauthorized people.

Social culture is one of the influences on the behaviour of employees. To achieve the target level of IT usage, it is important to investigate the behaviour of employees towards for example, implementing the ERP system.

## **2.4. The Saudi Political and Legal Structure:**

Historically, Al Saud, the royal family, first ruled in 1744. This dynasty began as a result of an alliance between Muhammad Ibn Saud Dir'iya (the district governor) and the religious leader Muhammad Ibn Abd Alwahhab. The drive was to re-spread Islam in the Arabian Peninsula. The Al Saud family ruled Saudi Arabia in three stages. The third phase began in 1902. In September 1932 Saudi Arabia was founded and officially received its present name (SAMIRAD, 2010). Abdul-Aziz Ibn Saud was first King of Saudi Arabia between 1932-1953 (Ansary, 2008).

### **2.4.1. Executive and legislative powers**

The current king is King Abdullah bin Abdulaziz Al Saud; he is in the direct line from the original ruler; he is the head of state (with executive powers) the governmental prime minister and he is in charge of members of the Council of Ministers (with legislative powers), who are appointed by him. Within this context there are consultative powers operating through the Consultative Council, or Majlis Al-Shura. The Shura Council is composed of a speaker and 150 members chosen by the King from Saudi people of knowledge, expertise and specialism. They provide advisory services to the King, but he is not bound to accept all their advice (Saudi e-Government National Portal, 2010).

Although there is this Council of Ministers, the system of governance in Saudi Arabia is that of an absolute monarchy. Thus the country follows a traditional/hereditary line of authority. The dynasty's right shall be confined to the sons of the founder, King Abdulaziz bin Abdulrahman Al-Faisal Al Saud, and the sons of sons (Saudi e-Government National Portal, 2010).

The current Saudi court system is composed of a Supreme Judicial Council, courts of appeals and first-instance courts (general courts and summary courts). Saudi Arabia also has an administrative judicial body known as the Board of Grievances, which stands alongside the court system and is affiliated directly to the King. The board's judicial function is carried out through the Board of Appeal Circuits, circuits of appeals and first-instance circuits. Each of these judicial bodies has jurisdiction over cases brought before it in accordance with Saudi law. In addition, the Saudi legal system has several administrative committees that adjudicate civil, commercial, administrative and criminal cases. The judicial jurisdiction of each committee is always enacted by the decree that constituted it.

#### **2.4.2. Sponsorship system**

One of the political contexts in which employers and employees have operated is the Sponsorship system, an arrangement whereby companies would sponsor the work visas of foreign employees. It has allowed companies to prevent employees from moving between jobs in Saudi Arabia. Such sponsoring companies would often hold employees' passports<sup>1</sup>. As a result, the Sponsorship system has had a huge influence on the behaviour of foreign employees in regard to their work and their job security. As my analysis will demonstrate, foreign employees in Saudi Arabia tend to be less likely to resist change within their work.

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<sup>1</sup> The Saudi Arabian sponsorship system issued by the Royal Order no. 8/20/5604 dated in 22/2/1374 Hijra '19 October 1954' (Ministry of Labour, 2010).

The Sponsorship system is a method followed in the Gulf countries to secure the recruitment of foreign labour from abroad. Until very recently, Sponsorship agreements restricted the freedom of movement of those sponsored outside the country and the freedom to work with any other party except with the agreement of the sponsor. However, in 2012, the Ministry of Labour planned to remove all restrictions exercised by employers on foreign workers, including restricted freedom of movement, holding their passport, and allowing free movement of employees from one company to another (Alaguetsadah, 2012). However, in 21<sup>st</sup> 2013 the Ministry of Labour announced that there is no intention to remove the sponsorship system, because it will cause chaos in the labour market through the movement of expats from one facility to another without the consent of the employer (Arabian Business, 2013).

The purpose of removing the Sponsorship system from companies is to ensure the rights of the foreign worker. Saudi Arabia is establishing recruitment companies, which are considered an alternative to the individual Sponsorship system. The new system will help allow the movement of expatriates between jobs in Saudi Arabia. An oil company is the first company in Saudi Arabia that started licensing expatriate labour companies (Al-Haqbani, 2013).

Saudi Arabia is only the latest of the Arabian Gulf countries to have removed the Sponsorship system, for example Bahrain did it in August 2009, Kuwait in 2011, United Arab Emirates in 2011 (Alaguetsadah, 2012). At this early point, it is not possible to assess the outcomes concerning the employment behaviour of foreign employees.

Another political influence on employment is “Saudization”, which is a policy to employ more Saudis. In the context of my study, both the Sponsorship system and

Saudization could be found to have an effect of attitudes towards change, in that foreigners might be afraid of being replaced by Saudis. One possibility could be that they may work individualistically and not share valuable information with other employees. In turn that behaviour could increase the challenge of using ERP systems, since knowledge would live within a very limited pool of people.

Economic factors such as the salaries of employees could influence change. Foreigners accept ERP systems because they receive higher salaries than in their home countries. While Saudis learn ERP systems to get better salaries somewhere else because there is no restriction on Saudis to move to other companies. However, in the context of my case studies, resignations of employees increased the challenge for Company 2 to implement an ERP system, since Company 2 only trains a few employees.

## **2.5.Economic Environment:**

This section describes some of the economic influences within Saudi Arabia. It includes the Saudi economy (including recent developments), its workforce and its contribution in the private sector, employment and unemployment, productivity, the salaries in the private sector, and the workplace attendance of staff.

### **2.5.1. A general view of the Saudi Arabian economy**

Saudi Arabia's economy is based on oil. The main economic activities are controlled by the government and the king. Saudi Arabia has about 20% of the world's oil reserves; it is the world's largest exporter of petroleum and it plays a leading role in Organization of the Petroleum Exporting Countries (OPEC). The oil sector accounts for approximately 80% of Saudi Arabia's budget revenues, 45% of GDP and 90% of

export revenues. In 2005 Saudi Arabia joined the World Trade Organisation (WTO) (CIA, 2010). The primary economic objective of Saudi Arabia, as expressed in the last eight development plans, is to reduce the dependence on oil as the main source of income; thus the economic strategy of Saudi Arabia is industrial diversification. It could be argued that labour force availability, including management accountants, is essential for economic diversification.

The most obvious example of the success of Saudi Arabia in accomplishing certain objectives for economic diversification is the start of SABIC, the Saudi Arabian Basic Industries Corporation. SABIC is considered one of the world's leading institutions in the petrochemical industries (SAMIRAD, 2010).

Saudi Arabia is in its ninth five-year plan; which began in 2010 and will end in 2015. Despite the fact that over 40 years Saudi Arabia has experienced eight plans to diversify the economy, oil revenues remain the main source of revenue for the economy. As in many countries, developed or developing, the government plays a major role in Saudi Arabian industrial activity, through the public sector.

Recently, however the government has sought to strengthen the private sector. Although development plans began 40 years ago there is no agreement on the goals behind the preparation of the plan (Alahmad, 2010). It could be argued that the level of growth required for the Saudi economy is higher than the level of the ability of the Saudi people. Therefore, there is a large reliance on foreign employees.

There are doubts that the five-year planned have achieved their objectives, for example, the three previous plans focused on the employment of Saudis, nonetheless unemployment for Saudis increased (Alahmad, 2010). This point will be picked up in the following section.

## **2.5.2. Saudi labour market**

The Saudi Ministry of Labour summarises the most prominent distortions experienced by the Saudi labour market as follows. First, unemployment stood at 12.02% in 2006, the highest rate compared to countries of the Organisation for Economic Cooperation and Development (OECD). Second, there has been an increasing reliance on expatriate labour. Third acquisition of the expatriate Visa is relatively free compared to in the rest of the world, thus encouraging foreign labour to Saudi Arabia. Fourth, the average pay for Saudis between 1997 and 2001 was lower because of competition from foreign labour. Fifth, there is a great variation between the jobs in the private and public sectors. In the public sector work is characterized by relatively high wages, job security and reduced working hours.

In contrast, work in the private sector is characterized by long working hours, low wages and a lack of a sense of job security for workers. According to the Ministry of Labour's statistics in 2007, the average worker's wage in the Saudi private sector is around £609/month, while the average wage of the foreign labour was about £179. Sixth, there are low rates of Saudi's participation in the labour market, especially for Saudi women. Saudi women's participation rate is about 13%, this ratio being exceeded by approximately 50% in all other countries of the OECD (Ministry of Labour, 2010, p. 34-35).

In 2006 the total labour force in Saudi Arabia consisted of 8.03 million people, with Saudis representing nearly 48.6% or 3.9 million people. The number of people who are of working age but do not work is nearly 7.8 million which represent 97%; of those, Saudis represent 87% or 6.8 million people (women represent 69% or 4.7 million people) (Ministry of Labour, 2010, p. 24).



Table 2.2 below shows Saudis' representation within the labour force by educational status and reasons for their exclusion from the labour force. Of the people who are not working 6.8 million people, not all of them are unable to work. Those who are unable to work are around 2.5 million. Students who are of working age represent 37% of the total number of Saudis. 422,000 retirees represent about 6%. 168,000 are disabled. Moreover, 2.5 million women look after their households, and they represent 48%. The financially independent represent 2%. The 'other' group, representing 5% of the total, receive financial aid from the government, from relatives, or from charities. In addition, it should be noted that the category 'other' includes a large number of holders of diplomas and university degrees; these make up more than 47,000 Saudis.

**Table 2.2 Saudis' representation within the labour force**

Educational Level	Student	At Home	Retired	Financially Capable	Disabled	Other	Total
Cannot read or write	0	1,175,813	105,710	46,859	130,145	69,306	1,527,833
Can read	35,644	364,635	62,999	19,917	15,693	19,399	518,287
Primary	493,438	524,666	107,489	18,698	12,196	64,998	1,221,485
Elementary	1,138,584	489,108	62,145	11,089	6,462	60,751	1,768,139
Secondary	818,809	532,625	37,600	7,243	3,426	53,297	1,453,000
Diploma	6,710	40,631	21,449	1,043	0	11,275	81,108
Bachelor	10,145	149,712	22,407	4,616	0	34,317	221,197
Master	1,177	727	2,657	747	0	1,328	6,636
Doctorate	0	669	515	305	0	0	1,489
Total	2,504,507	3,278,586	422,971	110,517	167,922	314,671	6,799,174

Source: (Ministry of Labour, 2010, p. 26)

Table 2.3 below shows the number of employees in the private sector. The statistical profile of employees in that sector shows that the proportion of Saudis working there is decreasing. In 2009, employment in the private sector represented less than 10% of total employment in Saudi. However, the ratio in 2001 was about 22% (Saudi Arabian Monetary Agency, as cited in Ramady, 2010, p. 186).

Thus, Table 2.3 below shows that a large proportion of the source of growth in the number employed in the private sector is foreign labour. The increasing use of foreign labour is also observed in the Gulf Cooperation Council (GCC). For example, the percentage of foreigners employed in the United Arab Emirates is 99%, while in the Arab Gulf it is 60% (Al-Kibsi et al., 2007, p. 20). One reason for the increase of foreign workers in Saudi Arabia is that recruitment is not monitored by the government. For example, in 2007, small construction companies with 10 employees and less brought a million workers to Saudi Arabia (Alzamil, 2011).

**Table 2.3 Private sector economic indicators (2001 and 2009)**

Indicator	2001	2009
Saudis	540,817	681,481
Non-Saudis	1,836,157	6,214,067
Employment total	2,376,974	6,895,548

Source: Column two, 2001 from SAMA (Saudi Arabian Monetary Agency) cited in Ramady, 2010, p. 186. Column three 2009 from SAMA, cited in Ministry of Labour, 2010, p. 113)

Table 2.4 below shows that the combined proportion of staff who cannot read or write and those who can only read represents about 72%, of whom about 98% are non-Saudis. The remaining figures show the percentages of Saudis, and it can be seen that they do not exceed 10% of the employees. Therefore, it can be said that the percentage of foreigners form the majority of employees in the private sector in Saudi Arabia. This information is important because it shows us that my research does not just reflect the circumstances and outcomes for Saudi employees, but also for foreigners. In order to gain some comparative data, two companies were selected, one public and one private, which used foreigners and Saudis to see the similarities and differences in the acceptance or rejection of ERP.

**Table 2.4 Employed persons by educational level**

	Saudi	Non-Saudi	Total	% Saudi	% Non-Saudi	Total %
Cannot read or write	13,506	967,867	981,373	1.38%	98.62%	14.23%
Can read	103,249	3,879,610	3,982,859	2.59%	97.41%	57.76%
Primary	59,433	193,297	252,730	23.52%	76.48%	3.67%
Elementary	115,664	310,384	426,048	27.15%	72.85%	6.18%
Secondary	257,268	344,056	601,324	42.78%	57.22%	8.72%
Diploma	51,584	204,350	255,934	20.16%	79.84%	3.71%
Bachelor	76,522	293,532	370,054	20.68%	79.32%	5.37%
Master	3,157	12,572	15,729	20.07%	79.93%	0.23%
Higher diploma	316	1,345	1,661	19.02%	80.98%	0.02%
Fellowship	40	374	414	9.66%	90.34%	0.01%
Doctorate	742	6,680	7,422	10.00%	90.00%	0.11%
Total	681,481	6,214,067	6,895,548	9.88%	90.12%	100.00%

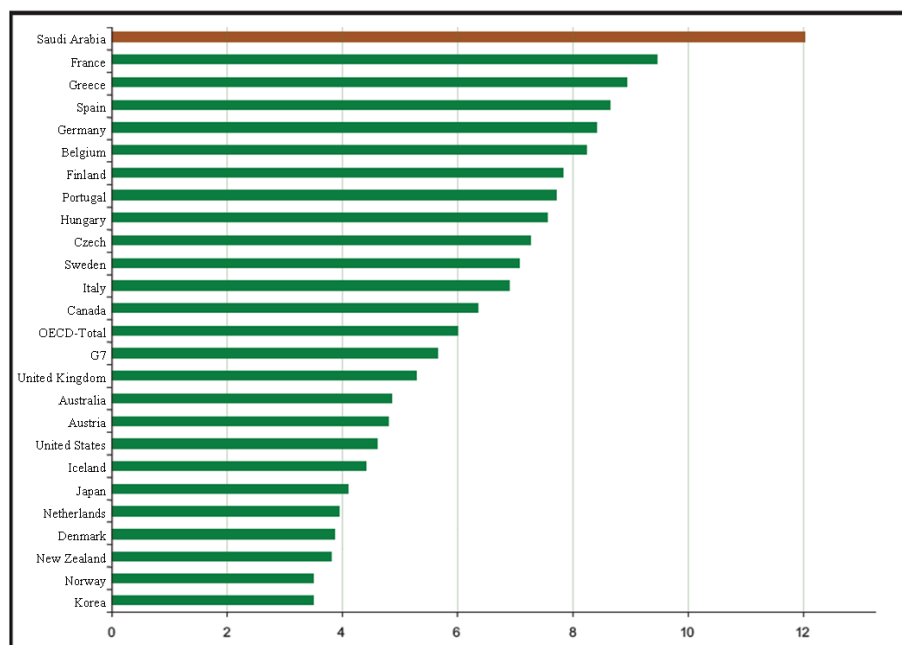
Source: (Ministry of Labour, 2010, p. 118)

### **2.5.3. Unemployment in Saudi Arabia**

Over the last 10 years or so, unemployment has risen significantly in Saudi Arabia; that is, in 1999 unemployment stood at 8.1% and by 2006 it had risen to 12.02% (Ministry of Labour, 2010). Figure 2.4 below shows international comparison of unemployment rates of each OECD country in 2006. It shows that Saudi Arabia is the highest out of all the other listed countries (Ministry of Labour, 2010).

It is important to note that the Ministry of Labour (2010) suggests that the real unemployment rate is actually higher than “advertised”. It indicates that 87% or 6.8 million of the Saudis available to work and not doing so have been excluded from the calculation of those unemployed. As mentioned in section 2.5.2, a significant proportion of them (4.7 million or 69%) are women. The definition of unemployment rules out large numbers of unemployed (Ministry of Labour, 2010, p. 29).

**Figure 2.4 International comparison of unemployment rates in 2006**



Source: OECD, cited in Ministry of Labour, 2010, p. 35)

The Department of Statistics and Information definition of unemployment excludes the unemployed from the following categories:

- “- Individuals who looking for work continuously or semi - continuously, but they did not look for work on the period of collecting data for unemployment.
  - Individuals who searched for work for a long time and then stopped looking after they have conviction that there are no jobs.
  - Individuals who found a job, but the salary was not commensurate with them.
  - Individuals who have their papers to the Ministry of Civil Service or for universities and waited, which may last for several years.
  - Individuals who prefer to wait with their parents until they find the right job.”
- (Ministry of Labour, 2010, p. 26).

Saudi Arabia is attempting to solve the Saudis unemployment rate with the policy of Saudization mentioned earlier. Saudization aims to encourage the employment of Saudi nationals in the private sector, either by replacing foreigners with Saudi nationals who can perform the same jobs and duties with the same quality and productivity, or by creating new jobs for Saudis.

There are also a number of recruitment projects run by princes, government institutions, private institutions and Saudi businessmen to support youth projects. Some of these projects are: National Organization for Joint Training (NSJT), Prince Sultan Fund for Women Development (PSFW), The HRH Prince Faisal bin Bandar Recruitment, Programs Abdul Latif Jameel Community Services (ALJCI) and Bab Rizq Jameel.

To try to ensure that the private sector is employing Saudis, government officials make surprise visits to private sector companies; in 2009 41,033 such visits were made (Ministry of Labour, 2010).

As might be appreciated, Saudization represents pressure on foreign employees. One result of that pressure is that there is a tendency for foreign employees not to tell fellow employees about the details of their jobs, so the company does not replace them. However, my research will show that Company 2 replaced large number of foreigners. In the past, the number of Saudis accounted for only 20% in that company, but now they represent 80% of the total number of employees.

It should be noted that the percentage of Saudis in the private sector represents only 10% of employees. Therefore, any study on the private sector in Saudi Arabia cannot be seen as representing conditions for Saudi workers unless this point is stressed. For example, while conducted in Saudi Arabia, some studies do not actually represent circumstances the Saudi employees, one such study is that of Irshad (2004).

Irshad (2004) suggests that major weaknesses in Saudi construction firms are: global operations, strategic planning, training, re-training and innovation in services, the activities of research and development, commercial participation, the use of information technology and information systems and the possession of knowledge. The context

suggests the impact on Saudi employees, however, according to the Ministry of Labour (2010) the percentage of Saudis in construction is only 2.3% of the total employees.

Because of the different percentages for the size of the labour force of Saudis and foreigners in the private sector, my thesis has to include both Saudis and non-Saudis in the investigation of the implementation of the ERP system. This is because it is difficult to separate Saudi from foreign workers because they are all represented in the private sector.

#### **2.5.4. Salaries of employees in private sector in Saudi Arabia**

Salaries in the private sector vary depending on the size of the company. Small and medium - sized companies usually have a low salaries, while in large companies there are usually high salaries<sup>2</sup>. Large companies would include SABIC, STC, and Saudi Electricity, (Jeffry, 2012). Also Saudi Aramco is another large company. Those companies have huge number of employees, 54,000 employees in Saudi Aramco (Saudi Aramco, 2014), 40,000 employees in SABIC (SABIC, 2014), 20,000 employees in STC (STC, 2014), 29,000 employees in Saudi Electricity Company (SE, 2011). Most of these large companies operate in the oil, gas and petrochemical industries. Those companies tend to constantly be developing new projects which increases the demand for employees; As a result of the Saudization policy, they need to employ Saudis whenever possible. However, because training has not caught up with the requirements

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<sup>2</sup> Al-Turkia (2011) indicated that in many studies, the size definition of a company is based on number of employees, for example a small size company is less than 100, a medium size company is less than 1000 and a large size company is more than 1000.

of Saudization, there is a limited number of trained employees in ERP systems in Saudi Arabia; therefore, these companies usually offer higher salaries for Saudi employees.

As will be seen in the case study, Company 1 is a medium-sized company and staff salaries are not high. However Company 2 is a listed company and they provide high salaries. Although Company 2 provides high salaries, other companies provide higher, thus many employees moved to other companies paying even higher salaries than. The Case study analysis will examine how large organisations influence the acceptance of, or resistance to, an ERP system in Company 2.

Private sector salary is an important issue for employment rates. Table 2.5 below indicates that non-Saudis are paid lower rates of pay than Saudis would expect to be paid. Some causes of the dependence on foreign labour are: the inability of the private sector to attract the Saudi labour force and also the inability of the private sector to offer attractive salaries (Al-Kibsi et al., 2007). Moreover, Saudi Arabia has one of lowest rates of pay within the Gulf countries: 80% of staff salaries are £847 per month or less (Alzamil, 2011).

Table 2.5 below shows the average salaries of employees in the private sector; however, because it does not contain the minimum and maximum salaries, it does not accurately describe the difference between salaries in small and large organisations.

**Table 2.5 Average salaries per month in pounds of employees in the private sector in 2009**

	Saudi			Non-Saudi			Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Cannot read or write	297	165	290	86	82	86	89	9131	89
Can read	381	316	379	84	98	84	91	122	91
Primary	493	234	486	110	100	110	192	168	192
Elementary	388	224	384	125	96	125	191	158	191
Secondary	430	291	422	201	176	200	294	264	293
Diploma	795	467	771	334	234	322	429	265	411
Bachelor	1304	487	1116	616	435	606	734	462	709
Master	2701	1451	2611	1226	1024	1205	1530	1088	1487
Doctorate	3452	2576	3377	1310	1137	1282	1545	1217	1494
Higher diploma	1027	576	1017	518	356	506	619	371	603
Fellowship	4585	4610	4589	1401	2452	1497	1692	2775	1797
Average	543	382	531	128	228	130	166	281	168

Source: (Ministry of Labour, 2010, p. 122) <sup>3</sup>

By comparing the salary scale with the number of employees in the private sector, on the one hand, 80% of the number of Saudi employees, or 549,120 people, have high school certificates or less and receive an average salary of less than £508 a month. In other words, 80% of the people receive less than the minimum salary. On the other hand, 20% of Saudi employees or 132,361 employees receive, on average, higher salaries than the minimum wage. The average monthly household expenditure on Saudi Arabia (housing, water, electricity, gas and other fuels) as well as food and beverages exceeded 33% of the Saudi average income (Juma, 2012). The cost of living rose steadily in the past years, 27% in 2011 compared to 2007 (Juma, 2012). Moreover,

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<sup>3</sup> 1 GBP = 5.90322 Saudi riyals; = 5.90322 is the average of the period from 05/08/2010 to 01/02/2011 (X-RATES. 2011. Available: <http://www.x-rates.com/d/SAR/GBP/data120.html> [Accessed 2.1.2011.



Housing cost have increased by 70.9% during the period from January 2007 until September 2011 (Khaznadar, 2011).

Therefore in June 2009, the Saudi government introduced a plan to make the minimum salary in Saudi private sector enterprises £508 (Human Resources Development Fund, 2011). Under the terms of this plan, financial assistance for a period of two years and three months of £169 and not exceeding £339 was also available for employees (Human Resources Development Fund, 2011).

The Human Resources Development Fund (HDF), which was founded in 2000, is the authority concerned with unemployment in Saudi Arabia (Human Resources Development Fund, 2011). In addition to providing employment services through a vocational orientation centre, the HDF provides financial and non-financial assistance.

The financial assistance that is provided by the government to facilitate Saudization policy would affect the behaviour of foreign employees. The private sector may replace foreign employees; therefore foreign employees are not willing to tell others about the details of their work. These effects are important in the success of the application of ERP systems which I will be exploring in the case study.

### **2.5.5. Problem of work attendance in Saudi Arabia**

The Control and Investigation Board is the government agency responsible for monitoring the regularity of attendance at work of staff in the public sector. Ratios in Table 2.6 show that 6% of the staff do not attend work on time. The percentage of late attendance is increasing. It is important to note that these percentages are based on the number of inspection visits and not based on daily data. Therefore, they represent only a ‘snapshot’ and late attendance ratios may be higher.

**Table 2.6 Control of the presence of employees of government agencies**

Year	Number of visits	Number of employees	Number of staff committed to attendance	% not committed to attendance
2000	6206	430300	25742	7%
2001	8068	645679	40490	6%
2002	6975	420363	31442	7%
2003	7821	495755	37818	8%
2004	9514	601539	46595	8%
2005	10949	680676	53374	8%

Source: (Control and Investigation Board) (I have adapted the table by adding the final column).

Between 50% and 60% of Saudis leave their work after a few months (Ministry of Labour, 2010, p. 9). Alsaadi and Alharbi (2010) showed that the low rate of salaries is behind those resignations.

Some companies actually play a role in the non-attendance of Saudi employees. For example, they allow Saudi employees to be absent, while continuing to pay their salaries, in order follow the government's orders to recruit Saudis (Al-Kibsi et al., 2007, p. 24). It should be noted that the Saudi government pays a percentage of the salaries of new Saudi employees in the private sector in order to assist growth within and security of this sector.

Other companies employ 'Ghost workers':

"Ghost workers are nationals whom companies employ only on paper to meet their quota requirements; once they fulfil the quotas, they can obtain more expatriate work permits." (Al-Kibsi et al., 2007, p. 25).

Moreover, other businesses get foreign workers through a system of 'Ghost companies'. People establish companies and employ foreign and Saudi employees, then

they sell the Sponsorship rights of the foreign employees to other companies. Al-Kibsi et al. (2007) indicated that 25% to 30% of GCC's foreign employees fall into this category.

Managers indicated that many Saudi employees are not well prepared for work, because the education system in gulf countries fails to prepare students for work (Al-Kibsi et al., 2007, p. 24). However, Al-Kibsi et al.'s study is from the viewpoint of managers of companies in the private sector and does not reflect the opinions of the employees of the main reason behind the lack of staff. Therefore Al-Kibsi study does not reflect the employees perspective or the economic and political factors within Saudi Arabia. Therefore my thesis will include managers, employees, internal and external factors that influence them to accept or resist the ERP system.

The Ministry of Labour (2010) indicates that the private sector prefers foreign employees because they will accept lower salaries than Saudis and work for longer hours without overtime. In addition, foreigners accept working in different cities, whereas Saudis prefer to work in their home cities.

#### **2.5.6. Recent economic development in Saudi Arabia**

According to the Saudi e-Government National Portal (2010) the Saudi government began massive development projects throughout Saudi Arabia. The increased revenue from oil is one of the reasons for starting huge development projects in Saudi Arabia. These projects have included developing the country's infrastructure and various service sectors, and these projects are as follows.

- King Abdullah Financial Centre: construction started in 2007. The total construction area of the project is about 1.6 million square metres.

- Communications and Information Technology Complex: this includes a set of advanced infrastructure for the establishment of modern industries, to develop the IT sector in the Kingdom. The total construction area of the project is about 1 million square metres.
- King Abdullah International Gardens: this project aims to improve recreation and tourism in the Kingdom. The total construction area of the project is about 2 million square metres.
- King Abdullah University for Science and Technology: this opened in 2009. The main campus occupies an area of more than 36 million square metres.
- King Abdullah City for Atomic and Renewable Energy.

Moreover, there are new projects in six economic cities. These projects are aimed at stimulating regional development, and represent the start of a new phase for industries and businesses. They are intended to contribute to the expansion of the growing non-oil economy in the Kingdom. Among these projects are the following.

- King Abdullah Economic City: this city will be ready to accommodate two million people. The stages involved in the completion will take the city 20 years; they began in 2006 and will last until 2025.

- Jazan Economic City: this city is focusing on heavy industries that are energy intensive. The total construction area of the project is about 3.3 million square metres. The city will provide 500,000 jobs.
  
- Abdulaziz Bin Musa'ed Economic City: this opened in 2006. The total construction area of the project is about 3.3 million square metres and the project's cost is estimated to be 5 billion pounds.
  
- Economic Knowledge City: the city is expected to attract investments worth 5 billion pounds and will also provide 20,000 new jobs.

Although the development projects are now established, they have not yet determined the level of influence on the orientation of Saudis towards their employment and, as an immediate consequence, the role and practice of management accounting in Saudi Arabia. However, those project will increase the demand for Saudis management accountant and as a result many employees would move to companies that pay higher salaries. In such situation, a company that pays less salaries could face lack of employees. Also, there is a high likelihood that these projects will significantly affect the requirements placed on universities, regarding the quality and quantity of education in amongst many professional areas including management accounting. I will address this matter in the following section.

## **2.6.General Overview of Education and Accounting Education in Saudi Arabia**

### **2.6.1. General education in Saudi Arabia**

In general, education is one of the most important ingredients of any successful nation. Historically in Saudi, education was available for a few people, both male and female, when the Kingdom was founded in 1932. The number of schools reached 182 in 1949, in 1951 there was an established programme of schools in the Kingdom; six years later the number of schools rose to 226 (Royal Embassy of Saudi Arabia in the United States, 2010).

According to Assad (2006) the national education programme for girls began in 1964 when the first school for girls was built. After five years, education was available for all Saudi girls; by the mid-seventies, half of the girls in Saudi went to school. Girls and boys now receive the same type of education and can achieve the same qualifications. Education is compulsory until the age of eighteen for both sexes.

Table 2.7 below shows human resource development since 1990 to 2008. It shows a rapid increase in growth of enrolment. Today, public education in the Kingdom of Saudi Arabia is better planned than it was even 20 years ago. It includes 25,000 schools and a large number of colleges and institutes. Education is free and is available for all Saudis until the undergraduate level. There are 3375 private schools in Saudi Arabia with 600,000 male and female students (Arab News, 2012). However, according to Williams et al. (2009) Saudi Arabia ranks as one of the lowest three countries in mathematics, and one of the last seven countries in sciences, the three years between the above pronouncements cannot account for this apparent discrepancy.

In addition to the changes made at the more basic educational levels, there is significant development in Saudi universities in terms of the quantity of money that the government spends on education. In 2004, the budget for higher education amounted to £2 billion (Director of King Saud University, 2009). By 2009 there were 7 universities, 76 colleges and 3,000 scholarships. Nevertheless, the experience of the teaching staff is weak, and the number of jobs for teaching assistants is limited.

Since 2009, the number of universities has risen from 7 to 21. As a result, higher education is now available in 73 cities, with the budget for higher education having risen further from £2 billion to £11 billion. In the same period of time, the number of scholarships increased from 3,000 to 70,000, and the number of colleges increased from 76 to 420 (Director of King Saud University, 2009).

**Table 2.7 National human resource development**

	Unit	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08
General education (male & female)										
Total enrolment	1000	4452.8	4530.1	4604.9	4477.5	4551.6	4643.2	4746.6	4812.5	4948.5
Primary levels	"	2285.3	2308.5	2316.2	2342.2	2385.5	2415.6	2433.1	2442.5	2469.9
Intermediate level	"	1073.8	1083.9	1113.3	1093.9	1078	1070.8	1100.3	1144.5	1188.9
Secondary level	"	756	794.2	842.2	885.5	892.1	953.2	1000.8	1013.1	1058.5
Others*	"	337.7	343.5	333.2	155.9	196	203.6	212.4	212.4	231.2
Growth in total enrolment	% p.a.	2.8	1.7	1.7	-2.8	1.7	2	2.2	1.4	2.8
Graduates (male & female)										
Secondary level	1000	191.7	192.6	200.1	222.7	239.4	253.6	267.9	310.8	
Growth in secondary level	% p.a.	15.6	0.5	3.9	11.3	7.5	5.9	5.6	16	
Pupil/teacherratio primary level		12	11.8	11.6	11.8	11.7	11.3	11.3	11.2	10.8
Pupil/teacherratio intermediate level		12.4	11.8	11.6	11.3	10.8	10.3	10.4	10.6	10.2
Higher education (male & female)										
Total enrolment	-1000	371.5	432.4	444.8	525.3	571.8	603.8	636.4	672	
Total graduates	"	55.8	74.5	73.6	81.7	83	94.8	105		
Growth in enrolment	% p.a.	10.5	7	2.9	18.1	8.9	5.6	5.4	5.6	
Growth in graduates	"	7.1	19	-1.2	11	1.6	14.2	10.8		

Source: Ministry of Education, Ministry of Higher Education, as cited in Ministry of Economy and Planning, 2009, p. 35)

Education has received much attention from the government; for example, undergraduate students receive £140 every month as financial aid towards meals, medical care and accommodation.

On 8 December 2010 a national centre for the development of educational leadership in the Kingdom of Saudi Arabia was established (Saudi e-Government National Portal, 2010). The centre is the first of its kind in the Middle East. It will soon launch a national programme for the selection and training of educational leaders of boys and girls, and another programme for developing school leadership.

King Abdullah bin Abdulaziz has been engaged in a project to develop public education through extending support to sectors, such as the communications and IT sector, in the deployment of IT. This project seeks to help 1 million families in Saudi Arabia to buy computers by paying for them over two years; it also supplies free courses for new IT users (CITC, 2010). Other projects have been put in place to develop education, including mobile learning, e-training, initiative convoys and initiative lectures and the distribution of culture and knowledge of digital information technologies. In regard to the impact of such policy development in the context of my research, the increase of people's awareness of using computers is one of the basic requirements for employees to accept ERP systems. As a result, what I will report and engage with in my thesis might not be reflective of circumstances in 10 years time.

### **2.6.2. Accounting education in Saudi Arabia**

Accounting education in Saudi Arabia started in 1959. At that time, higher education in Saudi Arabia began to offer a business curriculum in the College of Administrative Sciences (originally known as the College of Commerce) at the



University of King Saud. Accounting education was further expanded in 1967 and introduced in King Abdul Aziz University, and in 1974 in King Fahd University (Alnamri, 1993).

Currently, three universities offer undergraduate majors in accounting, these are: King Fahd University, King Abdulaziz University, and King Saud University. In 1976 the first Master's degree programme began in King Abdulaziz University. This was followed in 1985 with the delivery of a master's degree programme at King Saud University. After this accounting education began in various Saudi Arabian universities (Alnamri, 1993).

### **2.6.3. Accounting profession**

The first recognition of accounting as a profession, and with it the requirement that companies prepare financial accounts, was in 1965 (Al-Twajjry et al., 2003). The most significant development occurred in 1992, when the Saudi Organisation for Certified Public Accountants (SOCPA) was created. This body aims to develop standards of accounting and auditing in Saudi Arabia. In 2001 the GCC Accounting & Auditing Organization was established. It aims to organise and develop the accounting and auditing profession in the GCC countries and to achieve coordination and integration (GCC Accounting & Auditing Organization, 2009).

In Saudi Arabia, as in many developing countries, accounting systems are influenced by Western models; however, there is no regulation or reporting requirements (Kamla, 2007).

In 2010 there were 197 licensed Saudi accountants. Furthermore, the number of licensed offices amounted to 137 (SOCPA, 2010). It is interesting to note that the

number of qualified accountants is few but a Saudi accountant can establish an office and employ non-Saudi accountants to audit companies.

Alnamri (1993) shows that Saudi Arabia, among other developing countries, faces challenges in the accounting curricula. In general, the focus of accounting education is on technical aspects, such as bookkeeping, and there is less emphasis on philosophical and theoretical aspects and technical accounting. Alnamri (1993) says that there has been no change in the university accounting curricula since 1980. Anecdotally, I can support this argument through my own experiences of studying accounting at university from 1996, through becoming a teaching assistant in 2001 and continuing in this area to 2013.

## **2.7.Conclusion**

The chapter explored social, economic and political environments in Saudi Arabia. This chapter has emphasised a number of points pertinent to my research, and these are as follows.

Religion and social culture have positive and negative influences on the behaviour of employees. Encouraging cooperation can facilitate change, while sharing passwords may cause problems for the implementation of an ERP system. Identifying the religion and social culture influences on the implementation of ERP systems is important to include in my 1<sup>st</sup> empirical work.

Saudi Arabia is oil-rich and it using the associated wealth for economic and societal development. However, Saudi people tend to lack the training and skills for the sort of employment now available and, as a result there is not enough Saudi employees in the private sector to keep pace with the development. The Saudi employees only

represent 10% of employees in the private sector and thus Saudi Arabia depends largely on foreign employees. However, Saudi Arabia is in a period of transition that aims to replace foreign workers with Saudis. There are different employment policies – including the Sponsorship system and the Saudization policy- for Saudis and foreign workers; and these might significantly influence the behaviour of foreign employees and the implementation of change such as that from the introduction of an ERP system.

In addition to such socio-political influences there are economic influences. There is huge economic development in Saudi Arabia which requires the employment of many more Saudis than has been traditional as a requirement for Saudization policy. The increased demand for new employees can facilitate the change in those employees, encouraging their learning the ERP system. However, increased resignation of employees can make such implementation fail, since the company has to keep training employees to cover for those who will leave the company.

Therefore, understanding the contexts of the political and economic social culture in Saudi Arabia, as well as having a contextual awareness of religion, is important to include for studying the causes of the acceptance of, or resistance to, an ERP system.

## **Chapter 3: Literature review**

### **3.1.Introduction**

My thesis focuses on the agent, i.e. the employee subject to the change, as an important factor affecting the process of the implementation of an advanced management accounting system such as Enterprise Resource Planning (ERP) in a Saudi Arabian context. As such, it is not concerned with explaining the practices of management accounting or with the changes to those practices. This chapter provides a review and discussion of relevant literature in management accounting and change management in order to position my thesis.

The chapter first discusses the changes in the field of management accounting research to show how that body of literature informs my study and to position my own research in relation to it (Section 3.2). Section 3.3. defines and engages with organisational change. Section 3.4. reviews different approaches to studies of change. Section 3.5. explores management accounting and change management literature to identify the factors that influence the behaviour of individual. The concluding section explores how this literature informed the present study.

### **3.2.Management accounting research**

Management accounting has an important role within any organisation as it provides information to managers to help them make strategic and operational decisions. As with many organisational functions, it should be noted that there is no single, exact definition of management accounting. For example, according to the Chartered Institute of Management Accountants in the UK, management accounting is:

“An integral part of management. It requires the identification, generation, presentation, interpretation and use of information relevant to formulating strategy; planning and controlling activities; decision-taking; efficient resource usage; performance improvement and value enhancement.” (CIMA, 2000, cited in Wickramasinghe and Alawattage, 2007, p. 5).

Thus, while financial accounting focuses on reporting to external parties: such as investors; government agencies; banks, and suppliers through the means of the balance sheet; income statement; and statement of cash flows, management accounting is an essential part of the internal reporting mechanisms of an organisation.

According to Scapens (2006) two factors have affected the history of management accounting research. The first factor is seen through extensive discussions that started in the mid-1980s, to encourage researchers to examine alternative paradigms such as interpretive approaches to positivist methodology (Hopper et al., 1987, as cited in Abdul Khalid, 2000). Analytically, the 1970s were a time of essentially positivistic, economically-oriented mathematical models: researchers saw their role as providing techniques and theories of management accounting (Scapens, 2006).

There are limitations inherent to using positivist economic models. In general, these models were based on the assumptions approaches of neoclassical economic decision models rather than on a detailed understanding of practice (Arnold and Scapens, 1986, as cited in Scapens, 2006, p. 330). According to Scapens (2006) such statistical/positivist research only focused on explaining diversity in the population. Therefore some scholars such as Scapens have gone from the primacy of statistical/positivist research to interpretive research. Hoque (2006) indicated that, under institutional and contextual perspectives, researchers investigate accounting practice from the social, cultural and political standpoints within which it operates. The interpretive approach often involves Institutional Theory (see Chapter 4 – Theoretical Framework - for a discussion of this theory).

The second factor affecting the history of management accounting research is the claim of Johnson and Kaplan (1987) that management accounting practices have remained relatively unchanged. They argued that such practices fail to provide relevant information for management decision making. Their book is well-known – *Relevance Lost: The Rise and Fall of Management Accounting* – and according to Scapens, it has had important implications for management accounting research around the world (Scapens, 2006, p. 332).

One of the implications of that work is that Johnson and Kaplan (1987) introduced a great opportunity for others to discuss the area and encouraged the development of advanced management accounting techniques, such as Activity-Based Costing (ABC), which focused the role of management accountants on more realistic costing mechanisms and later, the Balanced Scorecard (BSC), which focused on performance management. In essence, it is from the development of such techniques that systems such as ERP have emerged<sup>4</sup>. Subsequent research has focused on the types of changes to the nature of work in management accounting wrought by such

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<sup>4</sup> ERP can be define as: “commercial software packages [that] promise seamless integration of all information flowing through a company” (Davenport, 1998), this boundary is extending to include the integration of applications outside the company (Sammon & Adam, 2005). For example, customer relationship management (CRM) applications are gradually becoming a part of the ERP product portfolio.” (Shakir, 2008, p. 313).

Grabski, Leech and Sangster (2009, p. 104) indicated that ERP system changed the role of the management accountants: “1. Changes in time spent on data collection. 2. Changes in time spent on data analysis. 3. Changes in involvement in business decision-making. 4. Changes in focus on internal reporting. 5. Changes in focus on external environment. 6. Changes in focus from historic to forward-looking analysis. 7. Changes in focus from domain specific to cross-functional analysis. 8. Changes in use of time resulting from elimination of routine report generation. 9. Changes required in the management accountant’s communication skills. 10. Changes in the formal and informal communication structure resulting from the ERP system. 11. Changes in the management accountant’s job satisfaction resulting from the ERP system.”

developments and these will be explored below. However, until now, research has not considered the reactions and behaviours of people whose jobs might have been subjected to those changes.

### **3.2.1. Driving causes for change**

A number of studies have investigated the change in management accounting. Some have focused upon understanding how management accounting innovations have been introduced in different organisations. One example of such work is that of Innes and Mitchell (1990) who proposed that at least three sets of factors are involved in the process of change in management accounting. These factors are: motivators (e.g. globalization of markets), facilitators (e.g. strategically well-structured situation) and catalysts (e.g. conducted strategic analyses). Another example is Cobb, Helliard and Innes (1995) who built on the Innes and Mitchell (1990) model and found that environmental pressures were the primary reasons for many of the changes, but that internal factors, such as the influence of individuals as change agents, were particularly significant.

Kasurinen (2002) further developed the accounting change model of Cobb et al. (1995) by typifying the barriers which may hinder, delay or even prevent the process of management accounting change in practice. These types are confusers, frustrators and delayers. Confusers, for example, reflect uncertainty about the project's future role in the organisation; frustrators include existing reporting systems; delayers for example, are inadequate information systems.

In consideration of the BSC, Kasurinen (2002) found that one of the causes of failure of its implanting was the incomplete implementation process. The lack of clear-cut strategies was the most significant barrier hindering the change. The division

managers supported the 'deeper level' goals, such as learning strategic thinking, at the expense of the more operational view proposed by the business unit management. Kasurinen showed how, after the resignation of the division general manager, the gap between the goals of the division and business unit management developed further. Other problems related to the existing reporting systems or the power distribution between the division and business unit management.

Therefore, according to Kasurinen (2002), the analysis of the confusers, for example, demonstrated the uncertain role of the BSC project in the organisation. Moreover, the examination of the frustrators uncovered the significance of the engineering culture in directing the goals of the business unit managers. Finally, the analysis of the delayers highlighted the difficulties in specifying the business unit strategy.

Kasurinen (2002) indicated that the BSC does not pay enough explicit attention to the context of change implementation such as the structural barriers. The absence of this contextual analysis may lead to only limited implementation and therefore only limited success.

Innes and Mitchell (1990), Cobb, Helliard, Innes (1995) and Kasurinen (2002) focused on the technical aspects of adopting new techniques, such as Activity-Based Costing (ABC) and Activity-Based Budgeting (ABB). These studies analysed the driving causes in the change process and identified that either result in, or do not result in, management accounting change. However, they only give reasons as to *why* changes occur or do not occur, and *not how* change occurs, or how those causes affect the change process and shape the nature of change (Li and Tang, 2009).



Therefore, my thesis should pay much attention to the context of change implementation in order to explain the factors that influence successful change or resistance to it. For example, the influence of the individual as a change agent as Innes and Mitchell (1990) indicated could be very important. This focus is perhaps particularly important in the Saudi Arabian context (see Chapter 2: Saudi Context).

To summarise this section, I have outlined different studies, for example Innes and Mitchell' (1990) exploration of the driving causes of change; Cobb, Helliard and Innes' (1995) finding that internal factors were significant; and Kasurinen's (2002) argument that the context of the implementation is important. I will now consider the Burns and Scapens' (2000) framework.

### **3.2.2. Burns and Scapens' (2000) framework**

Burns and Scapens (2000) placed their focus inside the organisation and explained the role of institutions in regard to human action. In the context of my study, Burns and Scapens' (2000) work is important because they focus on individuals and the institutions that influence their actions.

Burns and Scapens (2000) rejected the neo-classical economics assumption of 'utility maximizing rational behaviour' and used old institutional economic theory which suggests that human action is influenced by institutions. They adopted Hamilton's definition (1932) of an institution as being:

“A way of thought or action of some prevalence and permanence, which is embedded in the habits of a group or the customs of a people” (cited in Burns and Scapens, 2000, p. 6).

As a result, the Burns and Scapens framework is concerned with internal institutions; how they emerge and how they shape current actions. Burns and Scapens

stress that management accounting change can be seen in terms of the relationship between actions, rules and routines, and the underlying taken-for-granted assumptions in the organisation. They indicated that institutions evolve through the routinised actions of actors. Therefore, a certain pattern of behaviour is the norm of people within an organisation. Burns and Scapens (2000) argued that resistance to new management accounting systems is likely to happen if there was no careful consideration of the prevailing institutions within an organisation.

Burns and Scapens' (2000) work is important for my thesis because it addresses how the behaviour of individuals is institutionalised through rules and routines, and that those rules and routines might develop to challenge existing internal structures. Thus, institutionalised behaviours could be important factors for resistance of employees to a new system such as ERP.

There have been many criticisms of Burns and Scapens' (2000) framework, the original authors themselves contributing to the critiques. The first critique expresses its limitation because of its focus on stability rather than change. A number of researchers (e.g. Burns and Baldvinsdottir, 2005; Scapens, 2006; Ribiaro and Scapens, 2006; Johansson and Siverbo, 2009; Oliveira, 2010) have noted that it focuses on stability, not change, even though they have used the framework to study change in management accounting.

Moreover, Burns and Baldvinsdottir (2005) assert that the framework has a limited conceptualisation of the nature and possible dynamics of such change processes. Similarly Scapens (2006) has acknowledged the shortcomings of the 2000 framework in that regard. He identified others (e.g. Seo and Creed 2002), who argued that since

institutions are defined by their stability and that institutionalised routines become a force for such stability, they also become a force for resistance to change.

Therefore, my thesis can extend Burns and Scapens' (2000) framework by focusing on the factors that influence individuals who accept new systems such as an ERP system (see section 3.5), and also how they develop their perspectives as a result of change, leading to the consequent development of particular behaviours.

The second limitation of Burns and Scapens' (2000) framework is its ambiguity on rules. According to Oliveira (2010), Old Institutional literature, including the Burns and Scapens' (2000) framework, tends to interpret the term 'rules' in the limited sense of formal rules only. However, there is support in the literature for going beyond formal rules to consider the role played by informal rules, for example (Quinn, 2011, Kingston and Caballero, 2009). Quinn (2011) indicated that informal rules guide step-by-step behaviour based on past and present conditions, but formal rules set limits to behaviours and actions such as an organisation's policy; for example, an organisation requiring employees to follow formalised written procedures which set out methods, tasks and techniques such as standard operating procedures. I will extend the discussion of formal and informal rules in section 3.5.

The third limitation of Burns and Scapens' (2000) framework is its omission of other aspects that influence change. Burns and Scapens (2000) do not focus on the source of change. For example, as regards the importance of human agency (Sharma, 2009), the results of a number of researchers that work with Scapens identify other issues, such as trust, power and agency (Scapens, 2006), that help us to understand why employees accept or reject new systems. Also, Nor-Aziah and Scapens (2007) stressed that the 2000 framework needed to be extended to include the role of power and the

importance of trust in processes of accounting. Section 3.5. further extends the discussion of those factors.

In addition, there is need to include social, political and economic issues which influence the organisational context, because, as Burns and Scapens (2000) point out, the framework has an intra-organisational focus. Furthermore, as other researchers argue, external institutions cannot be ignored when discussing the decision of employees to accept the ERP system (Yazdifar et al., 2008).

Therefore, a gap exists in the literature regarding a broader framework, which considers internal and external causes of change. However, my thesis will address that gap and investigate it in more detail after the overall evaluation of Burns and Scapens' (2000) framework.

To summarise this section, although there are limitations to Burns and Scapens' (2000) framework, many studies use it because it explains the power of institutionalised behaviour in resistance to new management accounting practices. My thesis will extend Burns and Scapens' (2000) framework in light of the new development in the definition of routines which will be discussed in the following section.

### **3.2.3. Definition of routines**

The previous section explored Burns and Scapens' (2000) framework and identified its major limitations. I now discuss the issue of routines in order to explain how the repeated behaviour of employees can affect their reaction to change, in terms of both acceptance and resistance.

There is lack of conceptual progress on the matter of routines in the context of change in the work of management accountants and the way in which they react to such change. Becker (2008) noted that the concept of routine has become clearer for empirical research only in the past few years. For Becker (2008), the most likely reason for the former ambiguity in defining the concept of 'organisational routine' is the fact that scholars have used the notion to refer to three different concepts or issues: repeated behaviour patterns (Pentland and Rueter, 1994) rules or procedures (Leidner, 1993); and dispositions (Hodgson and Knudsen, 2004a and b).

The following is a definition of routines as repeated behaviour patterns for achieving tasks:

“For example, consider the task of taking an order by phone, which is often accomplished by using a particular sequence of phrases in a phone conversation between a call centre agent and a customer” (Pentland and Rueter, 1994, cited in Becker and Zirpoli, 2008, p. 130).

The definition is consistent with Burns and Scapens who view routines as ongoing systems of interaction, defining routines as both “...the way in which ‘things are actually done’ and as the ‘procedures habitually in use’” (Burns and Scapens, 2000, p. 10).

However, the first definition maximises the imposition of routine, in the case of the call centre, the use of a script for phone ‘conversations’, at the expense of the role of human agency, or self-determination, which could modify the routine. The first definition can help my thesis to explain some of the causes for resistance. However, it does not explain the influence of external and internal factors such as politics or culture. My 1<sup>st</sup> empirical work will investigate the major influences, if any, of the first definition of routines.

The second definition views organisational routines as rules ‘standard operating procedures’, which give rise to repeated behaviour patterns – “such as codified ‘best practices’ and process handbooks like McDonalds’ processes for providing fast food” (Leidner, 1993; cited in Becker and Zirpoli, 2008, p. 130).

In my view, the second definition is better than the first because it shows that human agency can play a role by following rules. In the context of Saudi Arabia foreign employees are influenced by different political policies, such as the Saudization policy which inevitably influences their behaviour. In other words, foreign employees get used to not training other employees, since the Saudization policy as a ‘*rule*’ influences their behaviour. Therefore, the practice of not training others becomes a habit over time for foreign employees. Unlike the first definition of routines which explains, for example that employees get used to the old accounting system and therefore, they resist the new one. However, the definition ignored the influence of other rules.

The third definition focuses on dispositions. The argument here is that organisational routines should include previously adopted or acquired behaviour to understand the organisational routines (Hodgson and Knudsen, 2004 a and b, cited in Becker and Zirpoli, 2008): “such as the capacity to take and process an order from a customer in a call centre” (Becker and Zirpoli, 2008, p. 130).

The third definition, which views organisational routines as dispositions influenced by past behaviour or human agency, could be an important start to understanding organisational routines (Hodgson and Knudsen, 2004a and b). Since dispositions can lead to particular behaviour. In the context of my thesis the 1<sup>st</sup> empirical work examines, for example, how political influences in Saudi Arabia affect

the behaviour of foreign employees who may not cooperate or help Saudi employees, because the latter, due to the Saudization policy, may take over their jobs.

Therefore, Becker (2008) identified an important gap in the routines literature. He indicated that the focus should be on the causes which influence the behaviour patterns, and my thesis helps to fill that gap. I have found evidence of the factors that influence the behaviours of employees, and, as will be seen in section 3.5. I have shown how they impact upon acceptance or rejection of change brought about by the introduction of the ERP system. My thesis, therefore, focuses on the many factors such as politics, economy and culture on the behaviour of employee, as was seen in Chapter 2 where I outlined and discussed the Saudi context, as it is important to take such aspects into account in order to explain the behaviour of employees.

Many studies such as Scapens' (2006) indicated that their framework is being less used in studying how institutional change comes about. However, Becker (2008) suggests that Burns and Scapens' (2000) framework is important because it could be extended to link rules, behaviour patterns and dispositions together. Burns and Scapens' (2000) framework is useful in trying to understand stability; why there is resistance to change; and how institutions shape rules and routines. For instance, further insight can be drawn from the feature of Burns and Scapens' (2000) framework which underlines the importance of institutionalisation. Employees repeated their behaviour many times as a reaction to cultural influences as explained in Chapter 2 Saudi context. The repetition of such behaviour helps it to become a habit. Therefore the repeated behaviour of employees 'habits' could influence the behaviour of employees to use an ERP system. Therefore, one contribution of my thesis is to develop the Burns and Scapens' (2000) framework and recast it to study change.

Chapter 2 showed that there are many factors, such as politics, economics, culture and religion that can influence behaviour. The response to those factors by employees can facilitate or impede change. Taking this approach, my thesis should include focus on causes of the behaviour (for instance, the influence of the environment) rather than on the behaviour *per se*. The first empirical work is an important step to extend the literature review and the second empirical work; as it will be explained in Chapter 5 Methodology and research methods.

### **3.3.Organisational change**

The above sections defined routines and discussed their importance in the context of the development of employee behaviours. That discussion showed the importance of focusing on the factors that influence behaviour rather than the behaviour *per se*. This section explores organisational change, the definition of change and the importance of managers in the process of change.

Many organisations operate in dynamic business environments, for example continuously developing their use of information technology and reacting to/contributing to changes in society. Saudi Arabia has witnessed huge changes in the labour force, for example, in 2009, foreign employees represent 10 times the number of Saudis in the private sector, whereas in 2001 foreign employees only represented 3 times the Saudis as indicated in Chapter 2.

Contemplation of change is necessary for any organisation since, without it, a business could lose its competitive edge or actually fall behind in its industry. Conceptualising organisational change is important for my thesis, since managers need to understand the relationships between different people in their organisation (to be able to identify any risks or opportunities for adopting new information technologies) while



understanding what the potential impact would be on their employees and, from that, how supportive resultant behaviours might affect the success or otherwise of change.

An example of a new system that companies may implement is an Enterprise Resource Planning (ERP) system. ERP systems are relevant to my study as they are one way by which organisations may seek to make changes within their management accounting systems (Arnold, 2006). Often, ERP has been implemented by firms because it is said to improve organisational efficiency, effectiveness, and performance (Arnold, 2006). However, Basoglu, Daim and Kerimoglu (2007) indicated that about 90% of ERP implementations are either late or over budget. Others have detailed that such projects are, on average, 178% over budget, take 2.5 times longer than intended and delivered only 30% of promised benefit (Zhang, Lee, Huang, Zhang, & Huang, 2005, as cited in Basoglu et al., 2007). One of the two companies studied in my thesis implemented an ERP, while the other was in the process of doing so.

Hughes (2010) indicated that recent managing change textbooks are increasingly engaging with the meaning of organisational change rather than simply considering a task change. According to Hughes (2010) there is no universal definition; the terminology that is related to change includes: 'organisational change', 'managing change' and 'change management'. Nevertheless, organisational change could be defined as "... the process by which organisations move from their present state to some desired future state to increase their effectiveness" (Venkatachalam and Sellappan, 2011, p. 130). However, what is suggested here is that such a concept only shows what changes occur, it does not explain how organisations manage the change. We know that wherever there are attempts to introduce change, there tends to be, to some degree or another, resistance to the change or to elements of it: "Change inevitably brings with it

varying levels of resistance” (NHS, 2008). It is important therefore for resistance to be treated with the same level of importance as the notion of the change itself.

Resistance to change has been defined as “behaviours acted out by change recipients in order to slow down or terminate organisational change” (Lines, 2004, p. 198). This definition of resistance is useful, since it focuses on the role of behaviour exhibited by people being subjected to change, and what resistant behaviour might signal for the success or otherwise of a change initiative. There are ways in which resistance can be addressed, indeed: “If you can transform resistance into commitment, your changes and improvements are more likely to succeed” (NHS, 2008). Whether that approach is possible in the context of Saudi Arabia, given its distinctive socio-political environment (as discussed in Chapter 2) will form part of my analysis later in my thesis. Therefore, exploring the factors that influence behaviour is important to explain both acceptance of and resistance to change. As suggested by the NHS extract above, managers need to understand the influence of employee behaviours on resistance to a new system such as ERP.

The enactment of management might be seen more in terms of ‘a performance’ than the application of economic logic, where managers need to create and work within an ‘organisational landscape’ consisting of people, things and structures (Shotter, 1993; cited in Holman and Thorpe, 2003). Here managers are not simply the instructors, but also the practical authors who have to persuade others to contribute to the success of the organisation (Holman and Thorpe, 2003).

In a follow-up paper, Thorpe and Holloway (2008) take this view further, and suggest that senior managers need to be involved at the beginning of every implementation of a new system. Also senior managers have to make sure that the

implementation is not modified or subverted by others in the organisation who are pursuing different goals and objectives. Moreover, Thorpe and Holloway contended that employees are important in the process of change, for example the training and commitment of employees can be greatly influenced by how they perceive and experience the commitment of those at more senior levels (ibid).

In the light of such a perspective, my thesis explores the factors that influence employees in regard to the introduction of change, and how managers' behaviours might influence employees to accept or reject a change initiative, such as an ERP system.

### **3.4.Approaches to studying change**

The above section suggested a definition of change and showed that managers need to take into account the factors that influence employees to accept or resist change such as that from the introduction of an ERP system, and further, that such factors include the behaviours and attitudes of the managers themselves. This section demonstrates where management accounting research into change is lacking in these contexts, and thus where different approaches can address that gap. I will now discuss the views of change as being a 'thing' or a 'process', before going on to discuss the 'how', 'what' and 'why' questions of managing change.

#### **3.4.1. Views of change as 'thing' or 'process'**

Van de Ven and Pooles (2005) indicated that how change is managed is influenced by two different views of change, one view sees change as a 'thing', the other as a 'process'. This discussion is important for my thesis, since to view change as a 'thing' is to focus on the outcome alone; for example to consider what has changed in

the organisation. However, to view change as process is to focus on the causes of the outcome as well; for example the political and cultural influences. Therefore, viewing change as process allows my thesis to include factors that influence individuals to embrace or resist change.

For studies that view change as a ‘thing’, the fundamental assumption is that an outcome will always happen when required conditions are met (Van de Ven and Pooles, 2005); such conditions include identity, structure, culture, and performance that are central to successful organisational enterprise. So, studies that focus on change as ‘thing’ aim to change the structure and culture, but not pay much attention to the context surrounding and possibly impacting upon the implementation of change, such as the structural barriers. However, as seen in the discussion of Kasurinen (2002) earlier, the absence of this contextual analysis may lead to only limited implementation and, I suggest, only very limited success at best.

Van de Ven and Pooles (2005) indicted that the studies that view change as a ‘thing’ usually use Variance Theory (Ledford, 1985; Burton-Jones, McClean and Monod, 2011) through which change is explained statistically in that independent variables explain variations in change as dependent variable. Therefore viewing change as a ‘thing’ would be inappropriate for my thesis since such a view is inconsistent with my episteme which requires a qualitative, interpretive context for analysis.

In contrast and more appropriately from my perspective, studies that view change as a ‘process’ focus on what happens in-between the input and output of change. Van de Ven and Pooles (2005) indicted that studies that view change as a ‘process’ usually use a ‘process theory’ (Burton-Jones, McClean and Monod, 2011) which focuses on describing a sequence of events relative to how development and change

unfold. Here change events can be represented as ‘a story’. In summary of these two approaches, the variance view focuses on *what* changes in an organisation, while the process view examines *how* the change occurs.

Burns and Scapens (2000) studied management accounting change as a process. They focus on how the repeated behaviour is institutionalised over time. However, they did not include the context of change implementation, therefore omitting a very significant component of that process. Exploring the context of the implementation of change is particularly important for my thesis and one of its aims, mentioned earlier, to extend Burns and Scapens’ (2000) framework. So, my thesis focuses on employees, their actions and their ability in using an ERP system. I view change as ‘process’, something that employees are actually involved in, rather than an external and abstract process that influence them, as is suggested by the Burns and Scapens’ (2000) approach, as well as the many other studies that have used that framework. Hence, my thesis explores how the implementation of change in my two case study companies was actually driven and the role of employees as part of that driving force.

I move on now to discuss the ‘how’, ‘what’ and ‘why’ elements of managing change.

### **3.4.2. The how, the what and the why of managing change**

In this section I discuss the main debates of my research on managing change within the change management literature. This discussion is helpful for my thesis because understanding the nature of the ‘what’ and ‘why’ questions will allow for inclusion of the contextual factors that influence the acceptance of, or resistance to, change in Saudi Arabia.

According to Hughes (2010) one of the major debates in the change literature relates to top-down versus bottom-up change. Hughes considers that the strength of the top-down approach is that change can be planned with a clear strategic direction, while the weakness of such an approach is that organisational change may be misunderstood or wrongly implemented at lower levels. From that perspective, the bottom-up approach addresses this weakness through emphasising the role of change agency at the lower levels in the organisation, the notion being that workers at that level can be encouraged to view themselves as ‘owning’ the change. The logic of that approach is that, if employees design and develop change initiatives, the implementation is more likely to succeed. In the context of the change of equipment or tools of the work, Perera, McKinnon and Harrison (2003) underline the importance of change agents for the change process and the necessity of considering organisational culture, values, norms and the past experiences of individuals that have to use the new tools in their daily work. Brainin (2008, p. 170) indicated that organisational culture can be seen as a reflection of societal culture, or culture-producers inside organisations. Also, the surrounding societal culture is seen as influencing the behaviour of employees. Hughes (2010) suggests that a hybrid recognising the valuable features of both top-down and bottom-up change may prove to be the ideal arrangement.

As was seen in Chapter 2, in the context of Saudi, incorporating social, cultural and political frameworks, all communications and decision making activities are top down. The implications of that for the introduction of change, and the extent to which non-managerial employees might be considered as having an influence would seem to be clear: they do not have the latitude for influence. However, as my study will show, such employees can make a significant difference to change initiatives, both for better and worse. In the context of Saudi Arabia the bottom-up approach may not formally be available, since foreign employees may not become change agents because the political

influences, such as Saudization, prevent them from fully cooperating with Saudi employees who may takeover their jobs. Therefore, Saudi Arabia is not necessarily going to conform to the traditional (Western) view of change.

There are many studies that generalise a way to manage change. Hughes (2010, p. 15) indicates “that generalisations misinform, rather than inform, the study of managing change”. It is important to note that addressing the reasons for failure does not guarantee that the change can be successfully managed, since manageability of change is arguably a misinterpreted perception (King and Anderson, 2002). Therefore, within my thesis I need to be clear about the fact that there are many factors influencing employees in Saudi Arabia, such as socio-political and socio-cultural factors that cannot be managed by organisations or their managers.

King and Anderson (2002, p. 162) indicated the general illusion of the manageability of change, suggesting that it is “...composed of three sets of second-order illusory beliefs - the illusion of linearity, the illusion of predictability and the illusion of control”.

The illusion of linearity will be questioned throughout my thesis, through consideration of elements such as trust and its role in the implementation of change, in the context of my thesis, the introduction of ERP systems. In much of the change management literature (Aladwani, 2001), the illusion of linearity suggests that change progresses steadily through a series of steps and stages, arriving at a successful outcome. Given the earlier extract from their web-based information, this same view appears to be taken by huge organisations such as the British National Health Service (NHS, 2008).

The second illusion is predictability. The predictability of forward looking organisational change has been questioned throughout my thesis, such as questioning the explanation of the role of institutionalised behaviour that is suggested by Burns and Scapens' (2000) framework.

The third illusion is based on the view that managers can have control over processes of organisational change in that change can be seen as planned but not emergent change. Therefore, in the context of my thesis I cannot assume linearity or predictability of particular factors such as the capacity of ERP systems to provide information that will lead to successful change. In the context of Saudi Arabia, one reason for this is that managers themselves could reject an ERP system, potentially seeing it as it minimizing their power. On the other hand, employees may accept an ERP system, because they may regard it as having potential to give them power to request information from managers that, in the past, they would not have been able to do because of the inherently 'top down' nature of the Saudi Arabian socio-political culture. In this example a particular factor could lead to acceptance of, or resistance to, change in a scenario generally not seen in the West.

A study by West et al., (2004) emphasised that changing the norms of employees can bring about organisational change. However, regardless of the large amounts of literature on culture change (see Deal and Kennedy, 1982 for an early definition of organisational culture; and Schein, 1984 for an early outline of 'best practice' in effecting organisational culture change), it can be argued that senior managers have only a very limited ability to change culture, since there are significant difficulties of changing attitudes, values and beliefs (Dawson, 1996; cited in Hughes, 2010), and senior managers tend to be out of touch with lower level employees.



Moreover, Watson (2006) argued that cultural change could influence official, as opposed to unofficial, 'versions' of an organisation. For example, Watson (2006) defines official aspects of the organisation as the rules, activities and values formally sanctioned by management, and the unofficial aspects as the rules, activities and values that develop at all levels in the organisation without formal managerial sanction. For example, "an organisational member follows a rule of never sharing information with people from outside their own department" (Watson, 2006, p. 260). From this we can take the notion that the official or formal aspects of an organisation might be relatively easy to change, but the informal aspects, the way that people deal with each other, are much less so. My thesis will explore both the official and unofficial rules that influence whether or not change is accepted; for example I will investigate the interpersonal and socio-cultural dynamics that lead to employees sharing or not sharing information with each other.

In the context of Saudi Arabia, there are many groups of employees relating to, for example, religion, city and accent. Moreover, politics can create classifications between employees since the government issued different policies for foreign employees such as the Sponsorship system and Saudization (see Chapter 2). Therefore foreign employees may not cooperate with other employees, perhaps even other foreigners. Moreover, culture and religion could influence employees to cooperate with each other (or not), which would affect the success of the implementation of an ERP system. For example, adherence to the teachings of the Quran should influence Muslims to help each other.

King and Anderson (2002) argue that understanding the psychology of individuals and teams is of prime importance in work settings as rapid and far-reaching changes continue to occur. They argued that the central theme of their 2002 work is to

interpret and explain people's work behaviour in the context of a continually evolving pattern of change. Moreover, the work of the motivational psychologist, Victor Vroom (1964), whose Expectancy Theory of Motivation, posited, in essence, that different factors motivate different people differently, depending on what they are drawn towards and the extent to which they anticipate achieving it (Lunenburg, 2011). Hughes (2010, p. 15) suggests that "Rigorous empirical studies of specific organisational change in specific organisations inform the study of organisational change and these studies are the best antidote for popular generalisations". Therefore, my thesis should focus on a narrow range of organisations rather than conducting interviews with people in many different organisations. Moreover, in my thesis I should focus on 'what' and 'why' questions, in order to explain organisational change rather than generalising a change model that could be applied in any context.

To summarise the above section, it showed the increased interest of researchers, in fields other than management accounting, to emphasise the role of agency in effecting change. Thus, we can see research going beyond the explanation of the Burns and Scapens' (2000) framework that is so prevalent in that field, and therefore the benefits of synthesising ideas from literatures not generally considered in the examination of change in management accounting systems. The potential to understand behaviour by focusing on the factors that drive it, such as norms and rules, was also demonstrated above. Finally it was shown that there is a need to focus on 'what' and 'why' questions rather than 'how' question of managing change.

The following section further explores the 'what' and 'why' questions. In particular, it explores the role of change agency and the factors that influence employees, such as culture, power, politics, system trust, personal trust and

psychological safety, to accept or or resist change, as indicated by the introduction of an ERP system.

### **3.5.Factors that influence the behaviours of individuals**

This section explores some of the factors which influence behaviour and the outcomes of human agency such as rules that are supplemented by culture or politics which are discussed in this section.

#### **3.5.1. Change agency**

Section 3.2. showed that Burns and Scapens' (2000) framework has limited interest in the active role of individuals in the context of change, for them, individuals' actions are influenced by routines, but they did not explain when or how individuals modify or change their actions away from those routines. Therefore, this section explores the role of change agency as an important factor in the study of change.

The Jisc infoNet (2014) differentiation of the terminology as used by practitioners offers a useful clarification of the meaning and role of the change agent and the change champion:

“...change agents are those people that really make the difference implementing the change at a local level. This will depend on the nature of the change but the role often falls to middle managers because they have the influence and authority to make the change take place.”

Thus, the change agent is formally appointed by the organisation, whereas change champions are :

“...the early adopters, colleagues who want the change implementation to succeed, and believe that the change will be beneficial to the Institution. The change champions will be members of staff affected by the change. They do not have to have management responsibilities.”

Thus, a change champion is an employee who is interested both in the change and in making it successful, but who is not appointed by the organisation. However, my thesis uses the term change agent to refer to managers and employees already working within their organisations, which is the way it was used in Sharma, Lawrence and Lowe (2010).

Sharma et al. (2010) focused on the role change agency to implement Management Control System (MCS) explaining that, in the case of a new system, there will be a difference in how staff interacted with the old and the new systems.

The role of change agents, as it was used in Sharma et al., is to find ways to address these differences by creating new ideas and routines to overcome the problems of the implementation of the new system. Sharma et al. indicated that active employees encourage other employees to develop and accept change. The role of change agents as interpreted by Sharma et al. (2010) is important for my thesis, since it allows me to focus on explaining why employees help others to implement ERP systems. My thesis will identify the existence of people who can be identified as change agents, as I interpreted the term above (i.e. widening the interpretation of the notion away from it only referring to formally appointed persons), and investigate their role to identify the factors that activate or eliminate the success of implementation of ERP systems within Saudi Arabia.

Sharma et al.'s study (2010) is useful to my own because they focus on the relationship between different agents within the organisation such as the CEO and management team who were the primary players driving the adoption of ERP. The management team play a major role in my thesis, since they can contact employees directly, and in order for the introduction of change to be successful, they need to be

aware of the wider factors that influence employees to accept or resist the changes brought about by the introduction of an ERP system. Therefore, my thesis draws attention not only to the change, but how it is managed so that the influences over employees to accept or resist the ERP system can be understood.

Sharma et al. also determined that culture plays an important part in change, their evidence showed how employees keep silent in a formal meeting as a sign of respect for the manager, but that such behaviour can be counter-productive because, in doing so, they do not express reservations or any other views regarding a change. Therefore, Sharma et al., indicated that managers need to reduce their power distance with their employees to encourage them to speak<sup>5</sup>. In the context of Saudi Arabia, this approach would represent a major challenge to the style of management present there, and indeed require a considerable change in management style, because in keeping with the socio-cultural nature of the country itself, all such communications are top down.

Sharma et al. (2010) indicate that culture can play an important role in the implementation of new system. My thesis can benefit from their study in that culture and the inherent power of senior management can play important role in the success or otherwise of implementation. Because of the cultural framework of Saudi Arabia, employees not overtly resisting the new system that does not mean they are in

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<sup>5</sup> Hofstede here as he was amongst the first to discuss the concept of power distance and other aspects linked specifically with particular cultural context such as the tendency towards individualism, groupness. Hofstede's cultural dimensions theory describes the influence of a society's culture on the values of people, and how these values relate to behaviour (Sharma, 2010).

agreement with the change nor that they will engage with the system as intended by management.

However, there are some limitations of Sharma et al.'s (2010) study. Their view is limited in that the acceptance or rejection of change comes from an active agency. However, they ignore the inactive agent who could be influenced by the ambiguity between the old and new system. Therefore, Sharma et al. only explain one part of the story, regarding the role of change agency, since they did not include the external factors, such as external social culture and politics that play an important part of the response of change agent. For example, wider social culture might influence employees to cooperate with each other, from that perspective, therefore, they might view ambiguity as an opportunity to help each other deal with the change. However, in Saudi Arabia where foreign employees are subject to Saudization<sup>6</sup> they might view ambiguity as opportunity to keep their jobs by keeping to themselves the knowledge and understanding, which might help other. Thus, foreign employees might not cooperate with others to overcome the ambiguity of an ERP system. Therefore, my thesis explores not only the role of change agency, but the factors that influence those subjected to the change.

So, it can be seen that Sharma et al. (2010) contributed to the literature by showing the importance of agency in effecting change. However, they did not focus on contexts such as wider social culture that influences change agency. Therefore, the

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<sup>6</sup> That is if they do not do their work 'properly' they could be removed from their jobs to be replaced by Saudis.

study of Sharma et al. (2010) can be extended by my research to include other factors such as political, economic and social culture that influence the behaviour of employees within Saudi Arabia.

### **3.5.2. Cultural challenges**

The above section explored the role of change agency in effecting changes within organisations. Much of the research in that area limits discussion of 'culture' to that of the organisation. Thus it fails to convey the extent to which wider social culture affects people within those organisations. In the case of Saudi Arabia, as seen in Chapter 2, there are some distinctive socio-cultural, political and economic features that are likely to have a significant impact on what might be expected to be seen within organisations.

I move on now to explore such cultural influences and the challenges they might pose for individuals in accepting or rejecting the ERP system. As indicated in my discussion above, external social culture could be one of the explanations for organisational change failure. Hughes (2010) indicated that most change management textbooks focus on senior managers managing change, but tend to remain silent about employees' experiences of organisational change. However, he indicated that there is increased engagement with employees' lived experiences of organisational change in the last decades (see: Dawson, 2003; and Buchanan and Badham, 2008). Thus, it might be argued, the specific circumstances of the wider socio-cultural environment of a country such as Saudi Arabia, and its impact on the success or otherwise of change initiatives, needs to be addressed as a means of contributing to the literature in this area.

It is useful then, within the development of my thesis, to review broad explanations for organisational change failures, such as cultural challenges, power and

political influences associated with employees. Such factors influence the behaviour of employees, but organisational change management has limited control on these factors.

The definition of culture frequently includes shared meanings, interpretations, values and norms (Alvesson and Sveningsson, 2008). Schein (1990, p. 111) defined culture as:

“... (a) a pattern of basic assumptions, (b) invented, discovered, or developed by a given group, (c) as it learns to cope with its problems of external adaptation and internal integration, (d) that has worked well enough to be considered valid and, therefore (e) is to be taught to new members as the (f) correct way to perceive, think, and feel in relation to those problems.”

Therefore, the definition of culture implies that it is related to a group of people and it transports to others, for example to new employees who joined an organisation. As indicated earlier, people may follow ‘a rule’ of never sharing information with people from outside their own department (Watson, 2006). In the context of Saudi Arabia, culture, politics and organisational culture are major influences on the social behaviour of employees. Therefore, existing employees may influence new employees to accept or resist change brought about by the introduction of an ERP system. Moreover, personal trust plays an important part, as will be discussed later.

Schein (1990) indicated that without the concept of culture we cannot truly understand change or resistance to change. He indicated that there is need to understand how organisational culture influences many activities in organisations such as training, the design of reward systems, the design and description of jobs. He further suggests that it is probable that many organisational change projects fail because they ignore cultural forces. Thus, in the context of my thesis, I should investigate what the influence is of culture on foreign and Saudi employees, or even Saudi employees from different towns who work together inside organisations.



However, the definition that is provided by Schein only focused on organisational culture, and does not include social culture which, it can be argued influences organisational culture. Institutional Theory (see Chapter 4: The theoretical framework) is concerned with understanding organisations within larger social and cultural systems. Pertinent to a study on the impact of change within management accounting systems such as my own, both social culture and organisational culture are largely missing from Burns and Scapens' (2000) work.

According to Cherry (2010) sociocultural theory, established in psychology, looked at the important contributions that society makes to individual development, stressing the interaction between developing people and the culture in which they live. In my thesis, social, cultural and organisational culture are important as a means of exploring the reasons for employees' acceptance of, and resistance to, an ERP system.

### **3.5.2.1. Researchers in management accounting exploring the influence of social culture**

Many studies such as Wickramasinghe and Hopper (2005); Idris (2007); Ansari and Bell (2009); Agourram (2009) and Hakeem (2013) explored the influence of social culture on acceptance of, or resistance to, a new system. In the Saudi Arabian context there is evidence that habits and social aspects have a negative impact on the quality of the Saudi labour force. Idris (2007) discussed cultural barriers to better organisational performance and the challenges and that perspective is useful in considering the situation of employees in Saudi Arabia. For example, social culture influences the type of jobs that are performed by Saudis, in that in general and at the current time, the Saudi people are not able to be technicians or accountants (Idris, 2007). One of the reasons for that is that Saudi Arabia has strong reliance on cheap foreign labour which accepts salaries much lower than Saudi employees (See Chapter 2 Saudi context). However,

that factor could also be seen as one of the results of such a situation. Moreover, Hakeem (2013) indicated that there are other reasons for Saudis' unwillingness to undertake vocational education. These include: incompatibility of vocational education with the requirements of the labour market. Furthermore, many universities do not accept students who graduated from school with vocational rather than academic qualifications, and not all schools provide the latter thereby limiting many opportunities for Saudis within their own country.

Therefore, in the context of my thesis, I should incorporate the aspects discussed above to explore the wider culture influences on people leading them to accept or reject change such as the ERP system. For example managers may not respond to other employees in authority; or that cultural influences on employees may lead them to accept change, since it could solve some of the negative influences of culture within the wider Saudi context.

Wickramasinghe and Hopper (2005) found that culture can affect workers and local managers against foreign owners. They studied a management accounting control system in a textile mill in a traditional village in Sri Lanka. The mill was established by the government as a public organisation. However, due to unsatisfactory performance of the mill, there was pressure for privatisation involving a foreign owner who introduced new practices for the employees. The performance improved after privatisation, partly as a result of adopting commercial budgetary practices. However, the capitalist mode of production conflicted with the traditional rural culture which was based on kinship obligations. There was a struggle against the foreign owner, who absconded after financial irregularities were found. As a result, the government took over the organisation again and returned to the previous practices (Wickramasinghe and Hopper, 2005).

In the context of my thesis, I should investigate the influence of culture on the behaviour of employees from different countries. Therefore, my thesis has to take into account political and culture influences on reactions to change by conducting the 1<sup>st</sup> empirical work and 2<sup>nd</sup> empirical work to view employees' perspectives on the influence of politics and culture.

Ansari and Bell (2009) showed that the emotional states of staff influence resistance to change by examining the implementation of a strategic cost leadership initiative (involving the introduction of ERP) at Shell Gabon, a Royal Dutch Shell unit in West Africa. They found that a major problem in the implementation of ERP is that employees do not feel valued and appreciated. In my thesis, the Sponsorship system, as discussed in Chapter 2 in regard to the Saudi context, gives many powers to the employer to act against foreign employees. For those employees who were accepted into Saudi through the Sponsorship system, that might be a factor that affects their reaction to change and that I will examine this by asking questions on the level of cooperation between Saudi and non-Saudi employees.

Thus, there is a need to study the needs of the users of management systems such as the ERP, and the causes of acceptance or resistance to such systems in order to introduce ERP systems successfully (Aladwani, 2001). For example, it could be seen that the availability of suitable technical support is important for employees' use of the ERP system. Therefore, my thesis investigates employees' needs in this regard and the impact of managers' reaction to those needs in employee acceptance of, or resistance to, the ERP system.

### **3.5.2.2. Researchers in IT exploring the influence of social culture**

Researchers in management accounting are not the only ones that focus on the surrounding environment and its impact on the change in management accounting. Nor is ERP explored solely in its context as a management accounting system. Studies focusing on ERP in the wider context of it being an information technology (IT) also include the surrounding environment as a factor influencing the change inside organisations. There are several studies in that regard, for example: Al-Jabri and Al-Hadab (2008); Abu-Musa (2005); Agourram (2009); Zaman (2009), and Hawking and Zhu (2009). All these studies focus on the ERP system in Saudi Arabia, explore the issue of culture and call for more people-centred research, and the following engages with them.

Al-Jabri and Al-Hadab (2008) focus on measuring the effects of four beliefs of a group of end users on the acceptance of ERP systems. These four beliefs of users are: perceived usefulness of the new system, perceived ease of use, expected capability and expected value. The result of Al-Jabri and Al-Hadab's (2008) study shows that strong predictors of attitudes towards ERP acceptance are expected value and perceived ease of use.

Al-Jabri and Al-Hadab's study (2008) is relevant to my own because it highlights human attitude/agency as a social factor that influences the acceptance of ERP on the individual level. Therefore, my thesis should investigate the view of managers to the value of ERP systems at work. The expected capability and expected value of ERP systems can be viewed differently by employees and managers, as explained previously using Agourram (2009) who found that managers want the system to support their power over information.

Abu-Musa (2005) contends that social culture can cause problems in using information technology. He found that Saudi employees in Saudi organisations share their passwords. Sharing of passwords could be a real problem in the success of the ERP system, because senior management could not be sure of the validity of the information that is provided by the ERP system, since it could be modified by unauthorised employees. Inappropriate use of passwords could be one of the culture influences on the delay of implementing ERP systems, where change management has to educate employees about the danger of sharing passwords.

Moreover, as suggested above, the Saudi Arabian social culture can greatly influence people's reactions to the introduction of change within the employing organisation. Agourram (2009) found that culture influences the action of managers, in that managers want the system to support their power over information and do not want to share information with other users. In that vein managers do not authorise employees' access to data stored in the systems, even if having access could improve employees' work effectiveness. It is an interesting finding which suggests resistance by managers (whether they realise it or not), while suggesting that employees might welcome such change. That is, managers may reject the system because it allows information to flow to others, whereas employees in that situation could accept the ERP system because it gives them authorisation to request information from managers. In the Saudi context, that would be an unusual situation given the usual downward flow of instructions and requests. Also, it could mean that factors cannot be studied as a linear relationship but an interrelationship, since factors mean different things to different people. This literature finding led me to interview both managers and employees to help me to uncover any such incidences.

Foster, Hawking and Zhu (2009) found that 75% of organisational change efforts involving technology fail as a result of people's negative reactions to changes in their work practices, organisational business processes and in the use of the technology, all of which, led people to resist the change. As a result, it was clear that I would need to ask my participants whether they perceived positive and/or negative implications of the introduction of change in their contexts.

The studies discussed above show that people play an important part in the success or failure of the implementation, thus calling for more 'people-centred' research. Therefore, including habits, social aspects, intentional behaviour and unintentional behaviour in the investigation of reasons which influence the change is important. Such an approach may highlight the hidden reasons for people resisting change in particular jobs, such as management accounting. It is relevant because social aspects have important influences on the action of employees in Saudi Arabia. Therefore, it is important to include to explain acceptance of, or resistance to, a change such as the introduction of an ERP system.

### **3.5.3. Power**

The above showed that wider social and socio-political culture can influence organisational change. In this section I focus on power influences. Buchanan and Badham (2008, p. 11) define power as “the ability to get other people to do what you want them to do”, whereas politics is defined as “power in action, using a range of techniques and tactics”.

Pfeffer (1992, p. 45) defined power as:

“The potential ability to influence behaviour, to change the course of events, to overcome resistance, and to get people to do things that they would not otherwise do”.

According to Hughes (2010) there are number of theories of power and politics influencing management and organisational behaviour, these theories include consideration of power bases (French and Raven, 1959); and power in organisations (Pfeffer, 1992).

I now briefly discuss each of these theories. French and Raven (1959) tried to understand power in terms of the power-holder. They identified five power bases:

“Reward power – rewards such as promotion and financial benefits; Coercive power- psychological or material punishment; Referent power- charisma; Legitimate power- emphasis upon roles and job descriptions; Expert power- specialist knowledge and expertise” (French and Raven, 1959; cited in Hughes, 2010, p. 211).

The power bases may be differentiated in terms of formal power being coercive power, reward power and legitimate power. Also, personal power being expert power and referent power. Moreover, Wickramasinghe (2006) indicated that power has to be understood by referring to its sources.

Different power bases may be used in different situations. My thesis will investigate how managers use their power to influence change through the introduction of ERP systems in Saudi Arabia. It is important to explore if managers use their power in such a way as to lead employees to resist that change, paradoxical though that might appear.

Pfeffer (1992) focuses on managing with power inside organisations. He identified four aspects to manage power. First, there is a need to recognise different interests inside organisations, with different political influences on employees.

Secondly, there is a need to recognise the different positions of different individuals. Thirdly, there is a need by some to have more power than those in opposition to be able to accomplish things. Fourth, managing with power involves understanding strategies, such as timing, using structures, understanding commitment and other forms of interpersonal influences.

Structure can give power to people inside organisations to do their jobs. Moreover, people lower in the hierarchy have the ability to exercise power (e.g. over the way that they actually choose to work), and that this could work either for change (acceptance/successful) or rejection/resistance (failure). For example, as explained by reference to Agourram (2009) earlier on, managers in Saudi organisations may resist ERP systems since they are likely to erode their power over information. Conversely, employees may accept ERP systems because they have the potential to enhance their power to get information or required information from managers.

However, Pfeffer (1992) suggested that hierarchical authority is limited, since people tend to need the cooperation of others who do not fall within their direct chain of command, or who they cannot reward or punish. So, for example an employee may not get the information s/he needs from a line manager who is in a different department.

The four aspects for managing power suggested by Pfeffer are important to my thesis, as they may help to evaluate the strategy of change management used to implement an ERP system. Further, this idea of managing power may help in investigating whether change management as we know it has enough power to implement an ERP system successfully in the Saudi context.



The above section explored the role of power that managers can use to influence change or resistance to an ERP systems. I will now explore the factors that influence managers to use their power in the implementation of ERP systems.

### **3.5.4. Politics**

The above section explores the concept and exercise of power. The Saudi Arabian context, addressed in Chapter 2 explored in detail some of the government/political influences over employees such as the Sponsorship system and Saudization. This section explores a political aspect through examination of the influence of Saudization on the reaction of employees.

Idris (2007) found that firing Saudis for poor performance rarely occurred, since the Ministry of Labour placed many conditions within employment policy to limit the firing of Saudi Arabian employees. The Saudization policy was one of these. The Sponsorship system discussed in Chapter 2 makes it difficult for foreign employees to move to other companies. Therefore, taking these two aspects together, it is probably safe to assume that they are likely to have influence over the behaviour of foreign employees, such as lack of cooperation with other employees, in order to retain as much control over their work as they can.

In contrast, we might assume that Saudization could influence Saudi employees to accept the ERP system, on the basis that such employees may then resign from their job to find other companies that pay higher salaries to those adept with ERP. With the increase in pace of economic development in Saudi, as explained in Chapter 2, many companies look for skilled Saudi employees. Therefore, there are different factors to be taken into account regarding the effects of the implementation of an ERP system - many Saudi employees, becoming adept with the system, could resign to take jobs with higher

salaries somewhere else. Therefore the Saudization system could itself lead to either acceptance or rejection of ERP. It is important, therefore, to consider under what conditions my participants would accept the introduction of the ERP system.

Conducting their work in the Pakistani public sector, Shad, Chen and Azeem (2012) found that employees did not share any information with their colleagues, because they believed they faced job threats from senior management and their peers. Shad et al., (2012) indicated that the problem is due to different factors such as implementation as well as cultural, environmental and political factors. For example, political and cultural factors resulted in a lack of communication between managers and employees. Since employees feel uncomfortable doing their jobs because of what they thought to be ambiguity and risk associated with the use of an ERP system. Also, public sector organisations in Pakistan are highly influenced by the state. Similar to circumstances in Saudi Arabia, politics has a large control on public organisations.

In the context of my thesis, politics has influence on the implementation of change and communications between employees. I examined this by asking about levels of cooperation between employees and what political influences might affect the communication between employees.

Therefore, understanding the political influences on employees is important to consider not only on the Saudi employees but on foreign employees who might be replaced as result of the Saudization policy.

### **3.5.5. System trust**

The role of trust may also help to explain employees' acceptance/rejection of a new system (Busco, Riccaboni and Scapens, 2006; Aladwani, 2001; Masquefa, 2008;

Scapens, 2006; Nor-Aziah and Scapens, 2007; Johansson and Siverbo, 2009). In the context of my thesis, I explored the factors influencing employees' use of the ERP system, even when they did not trust it. This discussion is important as a means of exploring the factors that influence employee acceptance of change.

There is often a tendency within the literature (such as Aladwani, 2001) to discuss factors that influence acceptance of, or resistance to, change as if such factors have a linear relationship. However, it is apparent (to Busco, Riccaboni and Scapens, 2006) that this is not the case and that distrust under some circumstances would lead to acceptance of change, not resistance. The following discussion will uncover the reasons for that.

Busco, Riccaboni and Scapens (2006) define trust:

“...as a psychological state mediated by organisational practices – such as MAS – and processes of social interaction.” (Busco, Riccaboni and Scapens, 2006, p. 36).

Busco et al. (2006) indicate that feelings of trust with ERP systems are essential for successful implementation of a management accounting system (MAS). They found that, in the context of their study, management accounting systems contributed in the creation of trust for change in practice, through their identification of new solutions to management accounting problems. They emphasised the importance of expert individuals who accept the new system and develop it. In the context of my thesis, through my empirical work I explored the role of system trust on the acceptance of employees.

Similarly, Aladwani (2001) suggests that if employees believe that the ERP system can be a positive influence on their own position, then they will develop strong

feelings towards accepting and adopting the new system. In the context of my thesis, these ideas were used to investigate why employees accepted ERP systems. As I pointed out earlier, employees may accept an ERP system, since it might give them power to get information from others.

However, there could be negative influences on the position of employees for example, Aladwani (2001) found that some users said that they did not need the ERP system since they had done their jobs without it for many years. Yet another group of users stressed that the ERP system may cause them to lose power and authority within the organisation (Aladwani, 2001). It was clear, therefore, that such issues and perspectives needed to be explored in my own study.

Nor-Aziah and Scapens (2007) explored the introduction of a new budgeting system within a recently privatised Malaysian utility company. They found that the accountants and operating managers had shaped the process of accounting change, in that they used two budgeting systems. Nor-Aziah and Scapens (2007) indicated that lack of trust and resistance to losing power were the reasons for using two budgetary system. They argued that the accountants and operating managers resisted the budgeting system, since there was no trust between them; they each saw the change as minimizing their power over information. The findings of Nor-Aziah and Scapens are important, since they indicated that the new budgeting system limited the power of both accountants and operating managers. In the context of my thesis, that finding led me to examine the influence of both personal and system trust in the context of managers' perspectives on change.

Nor-Aziah and Scapens (2007) argued that institutionalised ways of thinking, as suggested by the Burns and Scapens' (2000) framework, are not the main drivers for

resistance. Rather, it is the more personalised concepts of trust and power that are important. Those concepts open an opportunity to go beyond a focus on the role of institutions in shaping processes of management accounting change (as suggested by the Burns and Scapens' [2000] framework), to an emphasis on the role of individual agents in bringing about institutional change, or, indeed, resisting it. Nor-Aziah and Scapens (2007) argued the need for an extension of Burns and Scapens' (2000) framework to include the role of power and trust in studying the change. Therefore, trust and power represent important concepts within my thesis. As indicated in Chapter 2, the majority of employees in the private sector are foreign, therefore, a foreign manager could be regarded as more likely to resist new system, since it provides information and control to others.

### **3.5.6. Personal trust**

The section above discussed system trust. I move on in this section to discuss personal trust. As seen above, system trust can increase as a result of following rules from a decision maker, for example, the top management inside organisations (Busco et al., 2006, p. 36); whereas personal trust can play an important role in reducing resistance to change as found by Masquefa (2008). In his study, Masquefa found that both strong and weak interpersonal ties can help in the acceptance of a new system, in a situation when, in general, individuals are in favour of the new system.

In the context of my thesis, the issue of personal trust as a tool that management could use to influence employees to accept or resist the ERP system was important. Personal trust can be understood through appreciation of informal communication between people, and the interviews conducted for my study explored that.

Masquefa (2008) contended that the success of the change process depends largely on the nature of relationships between individuals within organisations. In his study, a lack of confidence in accountants led to the rejection of the new accounting system. Scapens (2006) also found that as a result of a lack of trust in the accountants, managers separated the financial accounting system from the operations of the business. Thus it was important to determine the level of trust accountants command in my case studies.

The work of Busco et al. (2006) and Masquefa (2008) agreed that interpersonal trust can reduce system distrust, strongly indicating the need to understand the role of trust and how this can influence the action of employees at all levels in a company. This finding led me to ask my non-management participants about the effect of personal trust in accountants regarding the new ERP systems. It was my view that, in the event that employees distrusted the ERP system, but still used it, it could be possible to examine whether distrust led to resistance; and explore that along with the factors that lead employees to use the ERP system.

This section explored the role of personal trust in reducing system distrust. The following section explores the role of psychological safety in reducing system distrust.

### **3.5.7. Psychological safety**

Psychological safety is a shared belief that the team is safe in the context of interpersonal risk taking (Edmondson, 1999). Edmondson (1999) indicated that psychological safety is different than trust, in that psychological safety focuses on a belief about a group norm, while trust focuses on a belief that one person has about another. Psychological safety is important to investigate, because it might explain why people use an ERP system when they do not trust it.

Busco et al. (2006) indicate that change agents are continually looking for some level of psychological safety. They argue that employees feel anxious when they are uncertain about using a system that they do not trust. Moreover, people feel fear, shame or guilt when they have difficulty in learning anything new. They indicated that employees cope with the associated anxiety by looking for some level of psychological safety. That might include: communication with other employees, and training to help develop a sense of psychological safety.

In the context of my thesis, the above literature led me to examine the influence of feeling anxious about learning and communication between employees with reference to the new ERP systems, and the extent to which acceptance or resistance might ensue.

Edmondson (1999) found that structural and interpersonal characteristics both influence learning and performance in teams. The results showed that psychological safety is a mechanism that helps explain how, for example support from other employees tends to positively influence behavioural and performance outcomes. Therefore, effective team working could provide an important source of psychological safety for individuals at work. In the context of my thesis, I believed it unlikely that effective team working would exist among foreign employees who are influenced by the political circumstances such as Saudization. I investigated this by asking questions related to the methods that employees used to feel safe.

Similarly, Johansson and Siverbo (2009) found that employees may try to protect themselves by allying with the people within the organisation who have power on the basis that people feel safe and protected if they follow senior management. In the context of my study, that could indicate that the order to use the ERP system even when

employees know it does not give quality information might lead them to accept rather than resist its implementation. Thus, it might be seen that there is passive resistance to the change. If that were to be the case, it would be less likely that the introduction of the new system would be successful even if it was not rejected. This is an important issue for my thesis and one that was pursued in the study.

Therefore, it can be seen that my study has benefited from the results of Busco et al., (2006) who found that the trust in or distrust of an ERP system are not the only factors that affect the acceptance or rejection of the system. However, the power of senior management and feeling of psychological safety are factors that are likely to affect the overall acceptance of the new system, even if individual employees do not. Thus, those factors appear to be interrelated and should not be studied separately. By including more factors it may be possible to explain how distrust, power of senior managers and safety can influence both change and resistance. My study included these and other factors to explain the behaviour of employees with regard to the relatedness of political, economic and religious contexts.

### **3.6.Conclusion**

Chapter 3 has presented my literature review. The main finding of this review has been that the Burns and Scapens (2000) framework, predominantly used within the context of work addressing management accounting change, is limited in its application. This is because of its primary focus on formal rules that influence the behaviour of employees. As a result, the framework has, essentially, served to minimize the active role of employees who are affected by change. More extensive literature from outside the area of management accounting research, such as Becker (2005a) and Hodgson (2008) has been drawn upon in my review to demonstrate the potential role of



employees in influencing acceptance of, or resistance to, change. Of course, much more literature has been reviewed in this Chapter and I have summarised it in Table 3.1 below:

**Table 3.1 Summary of the literature**

Authors	Main focus	The resultant research questions and issues
Burns and Scapens' (2000) framework	Formal rules influence routine	Is change of routine the main driver for resistance?
Becker (2005a)	Identifies three types of routines and shows that the behaviour can influence change	Does the behaviour of employees or managers influence change and resistance?
Number of studies (see below)	They show direct influence on the behaviour and indirect influence on change or resistance. They discuss change agency, cultural challenges, power, politics, system trust, personal trust and psychological safety	What factors influence the behaviour of employees? What factors influence change or resistance?

Source: developed from the literature review

The literature review presented in this Chapter has explored a number of factors pertinent to the outcomes of the introduction of change. Such factors include the roles of: change agency; social culture; power; politics; organisational culture; system trust; personal trust, and psychological safety. It is my contention that consideration of those factors is important to our understanding of what influences the behaviour of employees in their acceptance of, or resistance to, EPR systems.

From exploring the literature, the theoretical framework of my thesis is as follows: first, it examines whether and the way in which routines influence resistance as claimed by Burns and Scapens' (2000) framework. Second, it explores the concept of

behavioural influence on both acceptance of and resistance to change, as claimed by Becker (2005a). Third, it explores the role of the individual to explain acceptance and resistance in the context of change; and finally it examines the external and internal factors that influence: change, resistance and the behaviour of individuals. I discussed number of studies that focus on the role of the individuals and the factors that influence them such as (Schein, 1990; Pfeffer, 1992; Edmondson, 1999; Aladwani, 2001; Perera et al., 2003; Wickramasinghe and Hopper, 2005; Abu-Musa, 2005; Watson, 2006; Busco et al., 2006; Scapens, 2006; Idris, 2007; Nor-Aziah and Scapens, 2007; Al-Jabri and Al-Hadab, 2008; Masquefa, 2008; Yazdifar et al., 2008; Brainin, 2008; Ansari and Bell, 2009; Agourram, 2009; Zaman, 2009; Hawking and Zhu, 2009; Johansson and Siverbo, 2009; Sharma et al., 2010; Shad et al., 2012; Hakeem, 2013).

The aim of my thesis is to extend, through a qualitative study, our understanding of the influence of the behaviour of employees in the context of the introduction of ERP systems to the work of management accountants in Saudi Arabia. My thesis explores the factors that directly influence acceptance of and resistance to change. Also, more importantly it explores the factors that indirectly influence those conditions, through the influence on the behaviour of individuals.

My thesis argues that both direct and indirect factors are important to explaining acceptance of and resistance to change. It focuses on (i) why the change (introduction of ERP) happened, with particular reference to the socio-economic and socio-cultural contexts, and (ii) which factors might threaten to compromise change and lead to resistance to such change in management accounting. Thus it will explore the factors that influence successful change and resistance to it, through a case study method which will be described in Chapter 5. The 1<sup>st</sup> empirical work is important since it identify those factors that are seen as important by employees.

My thesis is important for top management and practitioners, within Saudi Arabia in particular, because there is a need for them to appreciate the importance of both their own behaviour as well as that of employees if they are to understand change and why it might be resisted, with particular reference to ERP systems. However, it might also be of general value in other parts of the industrial and commercial world where changes are often imposed by managers without their understanding of the role of employees in the success or otherwise of change initiatives.

## **Chapter 4: Theoretical framework**

### **4.1.Introduction**

As much of current research in management change uses Institutional Theory as a framework, my thesis now presents an overview of how the theory has been used to study management accounting. The Chapter investigates the external context of causes influencing the change, notably the frameworks of New Institutional Economics (NIE) and New Institutional Sociology (NIS). I then discuss the internal context of causes influencing the change, in particular the Old Institutional Economics (OIE) and Burns and Scapens' (2000) framework, its importance, its features and its development.

### **4.2.Overview of Institutional Theory**

This section investigates Institutional Theory, which is used by many researchers (including: Burns, 2000; Burns and Scapens, 2000; Ryan et al., 2002; Ribeiro, 2003; Yazdifar, 2004; Siti-Nabiha and Scapens, 2005; Ribeiro and Scapens, 2006; Scapens, 2006; Yazdifar et al., 2008). Those researchers examine management accounting and change. However, as it explained in the Literature review (See Chapter 3) they are looking at changes to management accounting whereas in my thesis I look at the impact of change on the behaviour of management accountants.

Ribeiro (2003) shows that Institutional Theory is used to extend the study of management accounting change to include the effect of both institutional dimensions (internal and external); which will be discussed later (in Section 4.3). The authors concentrating on this area of study (the Institutionalists) focus on the relationship that is established between individuals and their organisations and the predominant social culture.

In contrast, I use Institutional Theory to uncover and explore the reasons for the action of employees. Institutional Theory is used because it is a theory of stability. As seen in Chapter 3, one view on change within management accounting is that the behaviour of the agent is largely influenced by the stability of the organisation due to the rules and routines it has developed over time (Scapens, 2006; Burns and Scapens, 2000). My thesis argues rather, that the behaviour of employees is linked largely to externalities and internalities, and that the reaction of employees toward using ERP is not necessarily intentional. This suggests that employee reaction in the context and from the perspective of other research *is* viewed as intentional.

It is very common in the literature that the concept of an institution is associated with the organisational level. This is due to the adoption of Burns and Scapens' (2000) definition of an institution (Oliveira, 2010). The references that are used in this chapter are secondary, because the core theoretical approach of my thesis does not draw directly from the original theories, for example, Giddens' original work in (1984), but rather they draw on applications and developments of the Old Institutional Economics. Examples of the secondary literature to be explored below include: Burns and Scapens, 2000, Yazdifar, 2004, Scapens, 2006, Ribeiro and Scapens, 2006, Yazdifar et al., 2008, Johansson and Siverbo, 2009.

The three approaches to Institutional Theory frequently used in the field of management accounting are: Old Institutional Economics (OIE), New Institutional Economics (NIE) and New Institutional Sociology (NIS). The next section explores these theories.

### **4.2.1. New Institutional Economics (NIE)**

The term 'New Institutional Economics' (NIE) is largely linked to the work of Williamson (1975) who has been credited with making the greatest impact on management accounting research in the context of transaction cost economics (Major, 2002).

NIE is concerned with the structures that are used to manage economic transactions (Scapens, 2006). It investigates how the broader external environment has an impact on organisations. NIE begins by asking questions such as: why are organisations similar?; and what are the pressures and processes that form the organisations? (Scapens, 2006).

NIE is developed within the main economic framework which is an extension of neoclassical economics<sup>7</sup> (Yazdifar, 2004), and became the basis of studying traditional management accounting (Abdul Khalid, 2000).

There are some weaknesses of NIE. NIE as well as NIS focuses on the broader external environment. Thus, since the latter requires a focus that is internal to the organisation or organisations in which the resistance to management accounting practices is taking place, the combination of these two perspectives is unlikely to answer questions around why there is resistance to change in regard to management accounting practices. Furthermore, NIE is less helpful in investigating how techniques

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<sup>7</sup> Neoclassical economics simply assumes that people are rational and opportunistic, it seeks to explain why people appear to be opportunistic (Scapens, 2006).

come to be used in companies or why there is resistance to their use (Burns and Scapens, 2000).

Similar criticisms are reported elsewhere in the literature (e.g. Yazdifar, 2004; Abdul Khalid, 2000; Major, 2002). Some of these criticisms are that NIE is often too formal a framework: individuals are assumed to be rational, independent and are not affected by their institutional and social setting (Yazdifar, 2004). However, there are some strengths of NIE. Given the above view as expressed by the most influential researchers in this field, little research on management accounting change such as Burns and Scapens (2000) and Scapens (2006) have mentioned the strength of NIE. Scapens (2006) indicated that NIE could help to explain why business transactions are organised in particular ways and why firms share hierarchical structures. NIE can help to explain the cause and effect relationship. For example NIE can identify some of the economic causes that shape organisational structures can also explain the management control systems used in different types of companies.

Nevertheless, as suggested, NIE uses a logical economic approach to provide explanation, which is not necessarily a reflection of life as it is lived. In spite of the positive aspects mentioned above, Scapens (2006) adds another criticism to the ability of New Institutional Economics to identify economic causes that shape organisational structures. So, while NIE and NIS can help to understand the nature of the external pressures on organisations, different organisations may not have the same pressures, nor will they all react similarly even if the pressures are the same.

To conclude this aspect of my discussion, NIE theory excludes the importance of power, politics and culture when explaining organisational phenomena; it also has limited assumptions about individuals' behaviours. Therefore, NIE does not include

important causes relevant to the questions in this research. The next section will briefly outline NIS and comment on its usefulness to my study.

#### **4.2.2. New Institutional Sociology (NIS)**

NIS was originated by Meyer and Rowan in 1977. NIS focuses on the explanation of rules, symbols and beliefs, as well as the wider environment of organisations (Scott, 1987; Scott and Meyer, 1994; Selznick, 1996, as cited in Tsamenyi et al., 2006). This approach, where adopted by the literature mentioned above, has been to increase our understanding of accounting choices and behaviour (Tsamenyi et al., 2006). Moreover, NIS investigates why organisations look similar and addresses the pressures and processes that shape organisational structures and systems such as accounting practices (Scapens, 2006). For the purpose of legitimising the existence of an organisation, NIS raises the awareness that organisations need to conform to institutional rules and norms (Scott, 1987; Scott and Meyer, 1994; Selznick, 1996, as cited in Tsamenyi et al., 2006).

One important concept of NIS is isomorphism, a construct that proposes that similar formal structures are often adopted by organisations that operate in similar institutional environments and face similar challenges (Di Maggio and Powell, 1983, as cited in Kasperskaya, 2008). Analytically, there are three major types of institutional isomorphism: coercive, mimetic and normative. Coercive isomorphism could be the result of organisational conformance with regulatory and political mandates, new legislation and societal expectations. Mimetic isomorphism, which is related to uncertainty, is simply the copying of practices of those organisations most successful in this area of business. Normative isomorphism is related to managers who have had



similar university or training and so are likely to adopt similar practices (Kasperskaya, 2008).

NIS is different from NIE because it accepts as normal what NIE would consider anomalous; it stresses the importance of culture and power in shaping an organisations reality (Yazdifar, 2004) aspects that are excluded by NIE.

The literature discloses a number of weaknesses in NIS. First, it treats all organisations as similar, in that organisations would react in the same way as each other, as if there is no difference between them in regard to their response to external pressures (Nor-Aziah and Scapens, 2007). Also, NIS does not completely recognise the rational analytical purpose of organisational structure as it is presented by NIE (James, 2009). Secondly, some organisations may be subject to certain pressures more than to others; for example, political pressures (Scapens, 2006). Thirdly, there is over emphasis on how structure controls organisations (Johansson and Siverbo, 2009). Fourth, NIS focuses only on external causes, which makes it limited in terms of theorising market competition and intra-organisational power relations (Powell, 1991, as cited in Tsamenyi et al., 2006). Fifth, from this perspective, little, if any, attention is given to causes inside organisations; for example, the role of individual agency and the extent to which change comes about as a result of that (Ribeiro, 2003, Oliveira, 2010, Yazdifar et al., 2008, Sharma, Lawrence and Lowe, 2010). However, Scapens (2006) states that some researchers when using NIS look at actions and pressures within organisations (e.g. Oliver, 1991; Powell, 1991; and Greenwood and Hinings, 1996). Sixth, NIS focuses on causes that lead to stability, in other words, it ignores the more disruptive, or potentially disruptive aspects of change (Oliveira, 2010; Hopper and Major, 2007; Tsamenyi et al., 2006). Finally, the theory focuses on rules and not routines in explaining the change (Johansson and Siverbo, 2009).

There are some strengths of New Institutional Sociology NIS. Some researchers show that NIS is mainly helpful in allowing exploration of the nature of institutional disagreement within organisations and the nature of loose coupling (Nor-Aziah and Scapens, 2007). For example, Modell (2001) indicated that resistance can be associated with loose coupling at the intra-organisational level. Modell explored how managers can act as change agents. Moreover, Sharma, Lawrence and Lowe (2010) demonstrate that contradiction plays an important role in explaining management accounting change, in that employees try to find new ways to overcome the contradiction as it is explained in the Literature review in Chapter 3. Also, the theoretical framework of NIS can draw attention to the economic causes and external pressures that shape the structure of organisations and their management accounting practices (Tsamenyi et al., 2006).

To conclude this section of my discussion, many researchers agree that NIS is useful for exploring the influence of external pressures on organisational structures and on management accounting systems. However, both NIS and OIE remain focused on stability, not change.

#### **4.2.3. Old Institutional Economics (OIE)**

Many researchers (for example, Johansson and Siverbo, 2009, Burns and Baldvinsdottir, 2005, Abdul Khalid, 2000) in management accounting refer to the work of Thorstein Veblen (1898) as being the origin of Old Institutional Economics (OIE). He believed that large corporations were having an impact on social democracy in America. Scapens (2006) indicated that economics is seen by Thorstein Veblen as a process of social provision, which is associated with many factors, rather a series of static equilibria. In other words, Scapens indicated that human beings are a cultural product, and therefore economics requires anthropological and evolutionary

dimensions. Scapens indicated that there are concerns about the ability of neoclassical economics to address contemporary economic problems. Therefore, it is often that institutional economics are combined with other perspectives, such as the behavioural economics of Herbert Simon (e.g. 1955, 1959) and the evolutionary economics of Nelson and Winter (1982).

The attention paid to evolutionary economics increased after Nelson and Winter (1982) published their classic book on evolutionary economic change (Scapens, 2006). Subsequently, the work of Giddens (1984) recognised a duality between action (human activity) and the institutions which structure that activity (Scapens, 2006). Giddens explored the way in which habits, rules and routines can structure economic activity, and how they evolve through time (Scapens, 2006). Also, OIE was revived, especially in the work of Hodgson (1988; 1993) (Ribeiro, 2003).

The increased use of Old Institutional Economics indicates that its appearance and development can be seen as a response to the rejection of the ontological and methodological conceptions of neoclassical economics (Major, 2002; Ribeiro, 2003). In other words, OIE seeks to explain the behaviour of economic agents in terms of rules, routines and institutions, whereas neoclassical economics sought a series of static equilibria.

From the standpoint of Johansson and Siverbo, (2009), NIS and OIE complement each other; NIS explains the emergence of management accounting innovations in organisations, and an OIE explains what happens to the innovations thereafter (2009). The relative increase in studies that combine NIS and OIE (e.g. Nor-Aziah, 2004; Major and Hopper, 2007; Modell, 2006; Yazdifar, 2004 and 2008; Kholeif, et al., 2007) indicate that there have been developments in Institutional Theory.

For example, Yazdifar (2008) developed a framework explicitly integrating OIE with NIS as means of explaining how macro and micro levels of institutions shape and constrain the behaviour and actions of individuals and organisations, and to analyse how individuals adjust and change the institutions and organisations (Yazdifar et al., 2008).

Johansson and Siverbo (2009) suggested that OIE emphasises the taken-for-grantedness of the action of people, an approach that provides incomplete explanations of some empirical observations. For example, trust, power and agency are other causes of resistance or change, but these are not captured by OIE (Scapens, 2006).

### **4.3. Burns and Scapens' (2000) framework**

Much work in management accounting change has followed the interpretation of Institutional Theory developed by Burns and Scapens (2000). The limitation of Burns and Scapens' (2000) framework has been discussed in detail in the literature review (Chapter 3), but here it is re-examined to show how the view of Burns and Scapens of Institutional Theory can be seen to have a deep influence on exploring the influence of behaviour in change and resistance of employees.

The following discussion considers the purpose of Burns and Scapens' (2000) framework, its main features, core components and development. The basis of Burns and Scapens' (2000) framework is drawn from both Structuration Theory (ST) (Giddens, 1984) and the work of Barley and Tolbert (1997) on OIE (Scapens, 2006).

Burns and Scapens (2000) developed and introduced their framework to overcome some of the limitations of other studies (such as Innes and Mitchell, 1990; Cobb et al., 1995; and Kasurinen, 2002). As I explained in Chapter 3 those studies use a static approach and address mainly questionnaire data, answering questions such as how

the change in management accounting happened, but not *why* the change happened. Burns and Scapens (2000) emphasise that management accounting behaviour influences, and can be influenced by, institutions, routines and rules (Johansson and Siverbo, 2009). As already suggested, my thesis aims to extend Burns and Scapens (2000) framework, since such development has the potential to explain how the behaviour of employees might have become institutionalised over time. The institutionalised behaviour helps me to explain the indirect influence of factors on the acceptance of, or resistance to, an ERP system, such as politics, economics, social culture, organisational culture and information technology issues.

In order to understand the perceived importance of Burns and Scapens' (2000) framework in the field of management accounting change, it may be helpful to briefly recap its definition. There are three core components to the framework; these are institutions; rules; and routines.

With regard to institutions, it is noted that there is no one unique definition of an institution (Burns and Scapens, 2000). However, the commonly used definition of institution is: "a way of thought or action of some prevalence and permanence, which is embedded in the habits of a group or the customs of a people" (Hamilton, 1932, p. 84, as cited in Burns and Scapens 2000, p. 6). The literature review in Chapter 3 demonstrates progressive amendment to the definition. Burns and Scapens (2000) noted some weaknesses in the definition of Barley and Talbert (1997). Thus, they modified the definition as follows:

"... *an institution* as 'the shared taken-for-granted assumptions which identify categories of human actors and their appropriate activities and relationships. As such, institutions comprise the *taken-for-granted* assumptions which inform and shape the actions of individual actors'" (Burns and Scapens, 2000, p. 8).

The adjective ‘institutionalised’ is used by Burns and Scapens:

“By institutionalised, we mean that management accounting can, over time, come to underpin the ‘taken-for-granted’ ways of thinking and doing in a particular organization” (Burns and Scapens, 2000, p. 5).

However, Burns and Scapens focus purely on the management accounting system, ignoring the role of individuals and the external and internal factors that influence them and their behaviours.

Kingston and Caballero (2009) indicate that the appropriate definition of institutions is far from a settled issue. They indicated that the most commonly cited definition is by Douglass North: “[Institutions] are the rules of the game in a society, or, more formally, are the humanly devised constraints that shape human interaction” (North, 1990, p. 3, cited in Kingston and Caballero, 2009). Central to this definition is the role played by people in developing those institutions. In the context of Saudi Arabia, for example politics influences institutional developments through means such as Saudization. This policy influences foreign employees, in that foreign workers do not share job information because to do so would potentially weaken their employment. Therefore, it is ‘common’ that foreign employees work in an individualistic way.

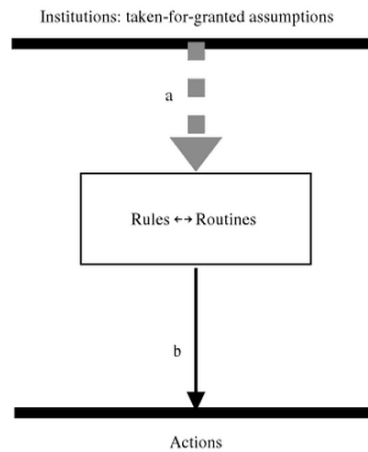
In the second component of their framework, Burns and Scapens define rules as “the formalised statement of such procedures” (Burns and Scapens, 2008, p. 87). However, the definition of institutions by North (1990) implies that institutions include both formal rules such as laws and constitutions, and informal rules and constraints such as conventions and norms (North, 1990, cited in Kingston and Caballero, 2009). The term ‘formal’ is often taken to mean that the rules are made explicit or written down, particularly if they are enforced by the state, whereas informal rules are implicit (Kingston and Caballero, 2009). Thus again there is evidence that Burns and Scapens

(2000) neglected the informal aspects of organisational life which can act as elements of control as effectively as the formal ones.

In the third component of the framework, Burns and Scapens (2000, p. 6) define routines as “the way in which ‘things are actually done’”. Johansson and Siverbo (2009) argue that the concept of routines is important within Burns and Scapens' (2000) framework, in that management accounting is largely driven by routines. In addition, Burns and Scapens' conceptualisation of accounting routines is widely used to understand accounting by researchers within the management accounting discipline. However, my research will show that this is a narrow conceptualisation. The limitation of the definition of routines is covered in more detailed in section 3.2.3, but, in brief my thesis follows the definition of Hodgson and Knudsen (2004a and b) who view organisational routines as dispositions influenced by past behaviour of human agency, since dispositions can lead to the causes of a particular behaviour.

Burns and Scapens explained their framework in three Figures (Burns and Scapens, 2008, p. 92). Figure 4.1. shows the relationship between institutions, rules, routines and actions of individuals. The top of the diagram (line a) shows the institutions' taken-for-granted assumptions reflected in the rules and routines of the organisation. As the diagram illustrates (through the broad dotted nature of line a), rules interact on an ongoing basis with taken-for-granted, assumed routines. The broad dotted nature of this line thus suggests that the assumptions and taken-for-granted issues within institutions have an abstract and indirect relation to rules and routines. However, those rules and routines also shape the actions of individuals within the organisation, and this is represented by the solid line b, suggesting a direct connection between rules and routines and actions.

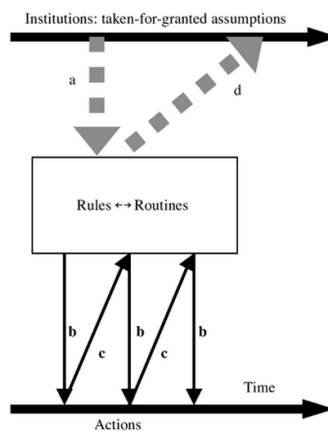
**Figure 4.1 The relationship between roles, routines, institutions and day-to-day actions in an organisation**



Source: (Burns and Scapens, 2008, p. 92).

Figure 4.2 shows how rules, routines and institutions come to be broadly shared in an organisation. Lines a and b, the horizontal lines, represent institutions and actions. They have a time dimension suggesting that the rules that are established as a result of using power can lead to the creation of new routines. Line c represents the reproduction of rules and routines over time, demonstrating that, over time, the rules and routines become institutionalised or taken-for-granted, which is represented by line d.

**Figure 4.2 The relationship between roles, routines, institutions and day-to-day actions in an organisation**

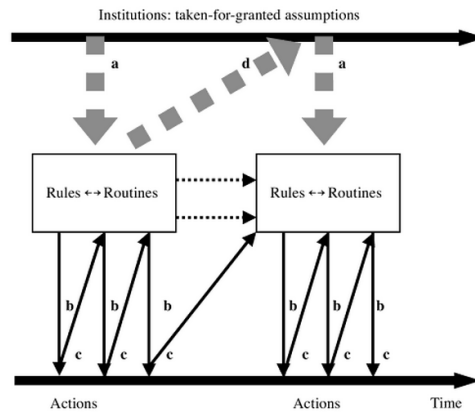


Source: (Burns and Scapens, 2008, p. 94).



Figure 4.3. explains resistance to change, which is seen as being likely if the assumptions underlying such change are in conflict with taken-for-granted assumptions in the organisation. The Figure shows the new rules and routines in the right-hand box.

**Figure 4.3 How rules, routines and institutions are widely shared in an organisation**



Source: (Burns and Scapens, 2008, p. 102).

To summarise, Burns and Scapens' (2000) framework focuses on the relationship between formal rules and informal routines, and the extent to which management accounting enjoys stability or endures change. That framework is important to my thesis, since it can be used to explain how the previously routinely repeated behaviour of individuals has an influence over individuals' tendency to accept or reject ERP systems. In the context of Saudi Arabia, aspects of behaviour such as Saudis' tendency for cooperation with each other and foreigners' tendency to work individualistically have become a norm for them. As a result, the behaviour of employees prior to the introduction of a change such as an ERP system is likely to influence the success of the implementation of that system.

Moreover, Burns and Scapens' (2000) framework helps to explain how the behaviour which is influenced by both external and internal factors has become

institutionalised over time. Their framework can be useful when the notion of 'rules' is extended to include the external and internal factors that influence the behaviour of individuals.

The next section explores the development of Burns and Scapens' (2000) framework.

#### **4.4.The development of Burns and Scapens' (2000) framework**

The previous section explored Burns and Scapens' (2000) framework. The next section extends the framework and the literature review (Chapter 3) and my exploration of the Saudi context (Chapter 2) uncovers more factors influencing change. There has been considerable development in our knowledge on the macro and micro organisational levels as a result of studies that have been driven by the insights and shortcomings of Burns and Scapens' (2000) framework. Those studies were discussed in detail in my review of the literature (Chapter 3).

The first development is in the contexts of agency and culture. Sharma (2009) examined the institutional contradictions that were in play within organisations and how change agency exploited the contradictions to introduce management accounting control system changes. He found that employees in Fiji in formal meetings with managers normally keep quiet, therefore the managers do not know if the employees agree or disagree with them.

Sharma (2009), argues that the framework is not clear as regards to when and how the agents can change the rules and routine. For example, it is the importance of human agency (Sharma, 2009), trust, power and human agency (Scapens, 2006), that help us to understand management accounting practices. Also, Nor-Aziah and Scapens

(2007) stressed that the framework needs to be extended to include the role of power and the importance of trust in processes of accounting. Thus, my thesis will answer that call for the extension of the framework by exploring the role of employee agency by examining incidents of employees' behaviours to understand and explain how they might lead to the successful introduction of, and/or resistance to, change

The second development is in the context of trust. There is a growing interest in this area; studies are starting to explore the relationship of trust in regard to management accounting change (e.g. Busco, Riccaboni and Scapens, 2006; Ribeiro and Scapens, 2006, 2007), with particular interest in how system trust or personal trust influence resistance; and how personal trust can increase trust in systems.

Describing the intertwined relationship between management accounting systems and trust, Busco, Riccaboni and Scapens (2006) suggest that Burns and Scapens' (2000) framework can be extended. Busco et al., (2006) found that trust in management accounting practices had a central role in enabling and coordinating processes of individual (un)learning and organisational change during the process of cultural transformation of the organisation. Therefore, system trust should be included to explain the behaviour of employees acceptance of, or resistance to, an ERP system.

Nor-Aziah and Scapens (2007) examine the presence and nature of trust between accountants and operations managers, arguing that there are interrelationships between trust, power and agency, and that they play an important part in explaining the change or resistance to an ERP systems. However, little is known about the relationship between them. Thus, my thesis will seek to explore the importance of both system trust and personal trust in the context of change, by investigating the role of personal trust

between employees, and exploring the factors that influence employees to use the ERP system when employees distrust the ERP system.

The third development is in regard to social, political and economic issues where there is a need to examine how those issues influence the organisational context, because, as Burns and Scapens (2000) point out, their framework has an intra-organisational focus only. Furthermore, as other researchers argue, external institutions cannot be ignored when discussing management accounting change (Yazdifar et al., 2008).

The above showed that Burns and Scapens' (2000) framework ignored the role of agency in change and resistance. The discussion above attempted to extend the Burns and Scapens' (2000) framework by including the role of agency. In particular, my thesis investigates the acceptance of, or resistance to, an ERP system and includes the external and internal factors.

#### **4.5.The use of Institutional Theory in other disciplines**

The above sections discussed Institutional Theory. This section briefly discusses the use of Institutional Theory to explain the use of ERP systems.

There is increased use of Institutional Theory in studies concerned with the use of information technologies, such as ERP systems, in management accounting. Scapens (2003) indicated that although a large amount has been written about ERP systems in the professional accounting and computing literature, rather surprisingly there is little attention paid to them in accounting research journals. However, the number of studies in accounting research journals increased in the last decade.

Where attention has been paid there are examples from field studies which indicate that ERP has an impact on the character of management accounting and the work of management accountants (Scapens and Jazayeri, 2003). Other studies with a different focus are in evidence, for example: the effects of ERP systems on management accounting (Scapens and Jazayeri, 2003); comparisons between experiences of ERP users and non-ERP users (Booth et al., 2000; Kholeif, et al., 2008); the changing role of management accountants and management accounting itself due to the use of ERP systems as control instruments within budgetary/performance systems (Granlund and Malmi, 2002); and the changing role of the management accountant, due to the use of ERP systems (Caglio, 2003).

The implementation of ERP has attracted the attention of Institutional Theory researchers (Scapens and Jazayeri, 2003, Busco et al., 2006, Sharma et al., 2010, Nor-Aziah and Scapens, 2007). However, several studies have indicated that the theoretical dilemma of studying how institutional change comes about remains unsolved (Seo and Creed, 2002, Scapens, 2006, Sharma et al., 2010, Englund et al., 2011):

“If the actions of organisational actors are constrained by institutions, i.e. their taken for granted assumptions, how do they come to recognise the need to change, and how do they recognise the opportunities and alternatives for change?” (Scapens, 2006, p. 25).

While my thesis is rooted in the management accounting area, it has the potential to contribute out with that literature to the area of information technologies by using Institutional Theory to explain the acceptance of, or resistance to, an ERP system. Thus, the development of Burns and Scapens' (2000) framework in section 4.4 is important contribution of my thesis and to the studies that use Institutional Theory to explain the use of ERP systems.

## **4.6.Conclusion**

This chapter explored Institutional Theory and its component parts: institutions, routines and rules to explain the relationship between individuals and organisations. Alongside the external factors such as politics and culture, along with the impact that those factors have on the acceptance of, or resistance to, an ERP system. Coupled with my review of the literature in Chapter 3, my thesis extends Burns and Scapens' (2000) framework to include external and internal factors that influence the behaviour of employees in the context of the introduction of change, specifically that brought about through the introduction of ERP systems to the work of management accountants.

My thesis is going to use the theoretical framework encompassing the role of routines that is suggested by Burns and Scapens (2000). External and internal factors will be used to shape and explain the findings of my empirical work, which has explored the proposed nature of change as a result of the introduction of ERP systems to the work of management accountants in Saudi Arabia. In particular, in Chapter 8, I will focus on the extent to which the factors examined above, including political, economic, social culture, organisational culture and information technology issues have influenced the extent to which management accountants in two Saudi companies accept or resist the resultant changes.

I divided the empirical work into 1<sup>st</sup> empirical work and 2<sup>nd</sup> empirical work. Since it allows to test and extend the Burns and Scapens' (2000) framework. The 1<sup>st</sup> empirical work and 2<sup>nd</sup> empirical work allow me to redirect and develop the literature review in Chapter 3 and the theoretical framework in Chapter 4. The following Methodology and research methods in Chapter 5 discuss in detail my research design of my thesis.

## **Chapter 5: Methodology and research methods**

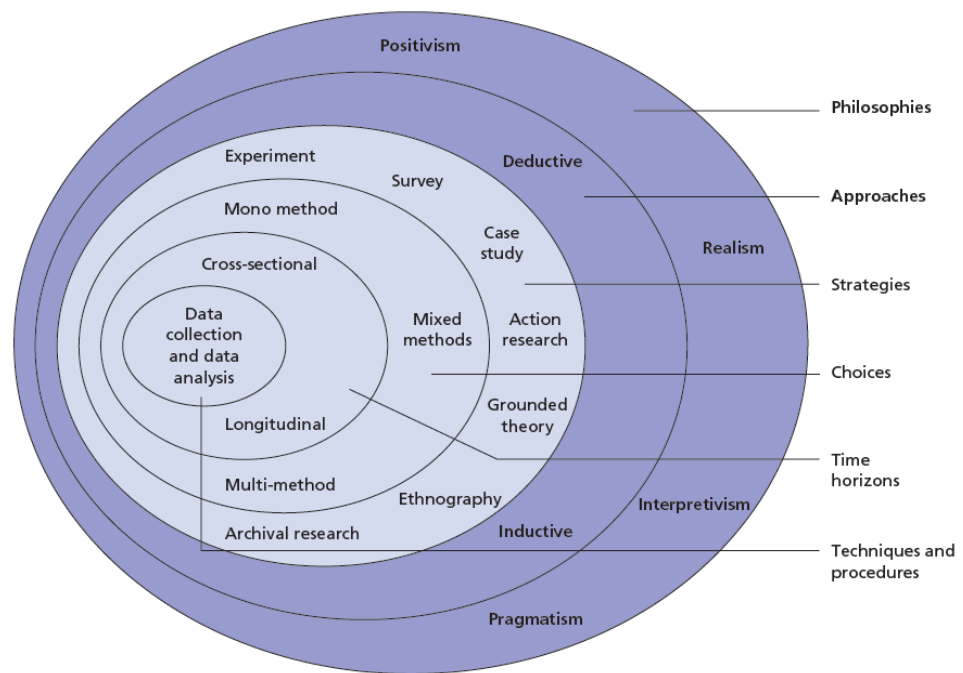
### **5.1.Introduction**

The three chapters above aim to ground my thesis. The Saudi Arabian context in Chapter 2 explored the political, economic and cultural factors in Saudi Arabia. The literature review in Chapter 3 identified several external and internal factors that influence change such as politics, culture, agent, trust and power. The theoretical framework in Chapter 4 focused on Burns and Scapens' (2000). It closed with a call for a need for a comprehensive framework for all these aspects of change and a need for 1<sup>st</sup> empirical work to identify factors that influence change and resistance in two case studies in Saudi Arabia.

My thesis investigates the process of change. In order for this question to be answered empirically, a full-blown research design needs to be developed. Chapter 5 is dedicated to this task. The aim of Chapter 5 is to develop a philosophically and methodologically sound foundation for answering my research question. Then, it shows the case study as a method and justifies its use.

Different stages of research design can be seen in the work of Saunders, Lewis and Thornhill (2009), who argue that research contains many layers. Some researchers begin by thinking about the method of research they should use, for example, questionnaires or interviews. For Saunders et al. (2009), there is a need first to address the different layers of research before choosing the method of the research. They demonstrate this view in Figure 5.1 below, which shows the different layers of research. They call it the research 'onion'. The first two layers illustrate the deliberate strategies, while the other layers show the emergent strategies.

**Figure 5.1 The research ‘onion’**



Source (Saunders et al., 2009, p. 108)

The next sections reflect, first, the deliberate components (the researcher’s ontological, epistemological assumptions, methodology, then, the focus is on the emergent components (the method and on techniques that are used to collect data and analysis data).

## **5.2.Assumptions about the Nature of Social Science and Society**

The research philosophy contains important assumptions about the way in which researchers view the world. These assumptions will underpin the researcher’s research strategy and the methods he/she choose as part of that strategy (Saunders et al. 2009). A Paradigm is “a basic set of beliefs that guide action” (Guba, 1990, p. 17, as cited in Creswell, 2009, p. 6). Another definition is that:

“it is a term which is intended to emphasise the commonality of perspective which binds the work of a group of theorists together in such a way that they



can be usefully regarded as approaching social theory within the bounds of the same problematic” (Burrell and Morgan, 1979, p. 23).

Researchers use different terms such as Creswell (2009) who use the term worldviews as a general orientation about the world and the nature of research that a researcher holds. These worldviews are shaped by the discipline area of the student, and by the beliefs of faculty in a student’s area and past research experiences. The types of beliefs held by individual researchers will often lead to accept a qualitative, quantitative, or mixed methods approach in their research.

Burrell and Morgan (1979) suggest that paradigms can be utilized at three distinct levels. At the philosophical level, it is utilised to reflect basic beliefs about the world. At the social level, it is utilised to offer a strategy about how researchers should conduct their studies. At the technical level, it is utilised to identify the methods which should be adopted when performing research.

In their highly influential work, Burrell and Morgan (1979) proposed that identifying and analysing the assumptions that underline social theory can be considered in terms of four fundamental paradigms, based upon different sets of meta-theoretical assumptions about the nature of social science and the nature of society.

The next section will show the first dimension of the ‘subjective-objective’ of Burrell and Morgan’s (1979) scheme for analysing social theories. The subsequent section considers the second dimension of the ‘regulation-radical change’ of Burrell and Morgan’s (1979) scheme for analysing social theories. Then it highlights the four paradigms of Burrell and Morgan (1979). Last it examines research paradigms for the present study.

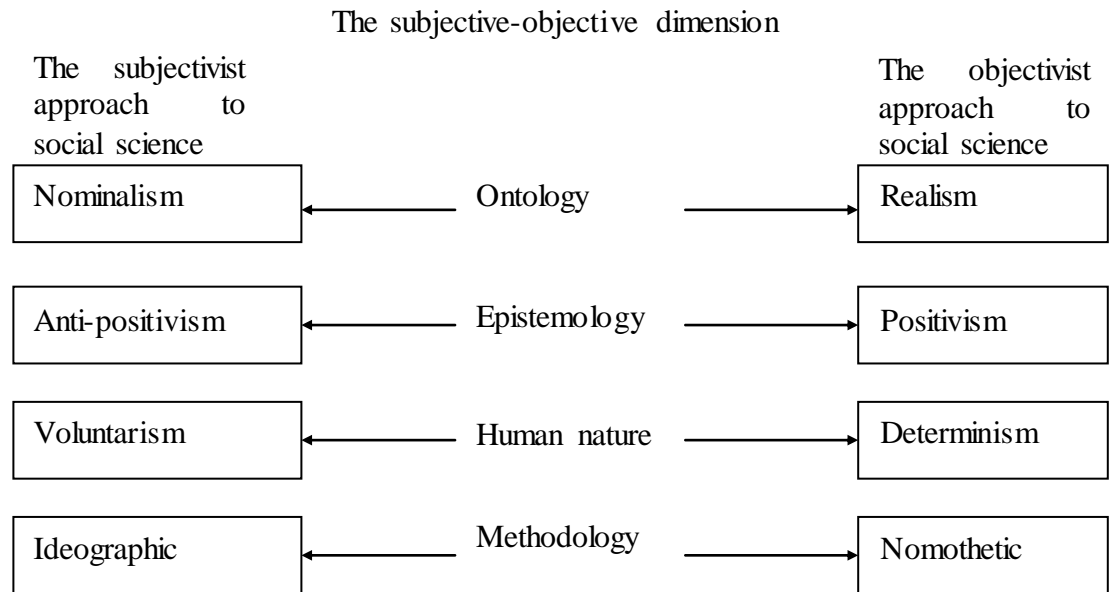
### **5.2.1. The subjective-objective dimension**

Many scholars including Burrell and Morgan (1979), Tomkins and Groves (1983), Hopper and Powell (1985) and Ryan et al. (2002) indicate that the four concepts of ‘ontology, epistemology, human nature and methodology’ are related to each other. The three sets of assumptions – ‘ontology, epistemology and human nature’ – have direct implications for a methodological nature (Burrell and Morgan, 1979).

The word ontology refers to the nature of the world, in general, and the research phenomena, in particular. Epistemology refers to the kind of knowledge about the world. Human nature refers to the relationship between human beings and their environment. Methodology refers to the research process and its main characteristics.

As suggested by Burrell and Morgan (1979), the assumptions related to the nature of social science can be described in terms of a subjective-objective dimension. Therefore, each of the four elements represents two philosophies. Figure 5.2 below shows these elements from the subjective-objective dimension as identified by Burrell and Morgan (1979). In the following section I will review each of the four debates.

**Figure 5.2 A scheme for analysing assumptions about the nature of social science**



Source: (Burrell and Morgan, 1979, p. 3).

### 5.2.2. Nominalism-realism: the ontological debate

Ryan, Scapens and Theobald (2002, p. 13) define ontology as “the study of existence. Ontology raises questions of the assumptions that we make about the way in which the world works”. Ontology is concerned with the nature of reality. According to Saunders, Lewis and Thornhill (2009) there are two generally accepted aspects of ontology. The first is objectivism, which shows that social actors are independent of social entities. The second is subjectivism, which shows that individuals are attached to social phenomena (Saunders et al., 2009).

Moreover, Burrell and Morgan (1979) argue that ontology can be divided into two distinct positions: nominalism, whether reality subsists within individual minds; or realism, whether it is the product of an objective nature. In contrast, realism assumes the existence of a social world external to individual cognition.

Later, Morgan and Smircich (1980) proposed a list of six ontological assumptions. These assumptions offer six different alternative approaches to viewing the world (Ryan et al, 2002). The six ontological assumptions range from the assumption that reality is a ‘concrete structure’, which represents the most objective view, to the assumption that reality is a ‘projection of human imagination’, which represents the most subjective view of the world. Between these two extremes, there are four intermediate assumptions, which can be viewed as points on the objective-subjective continuum (Ryan et al, 2002). Table 5.1 below shows these ontological assumptions.

**Table 5.1 Six ontological assumptions**

1. Reality as a concrete structure (naive realism)
2. Reality as a concrete process (transcendental realism)
3. Reality as a contextual field of information (contextual relativism)
4. Reality as a symbolic discourse (transcendental idealism [Kant])
5. Reality as a social construction (social constructionism [socially mediated idealism])
6. Reality as a projection of human imagination (idealism [Berkeley])

Source: (Morgan and Smircich 1980, p. 492, as cited in Ryan et al., 2002, p. 36).

The first three realities focus only on rules (Ryan et al., 2002). While the sixth ontological assumption – ‘Reality as projection of human imagination’ – places more emphasis on individual feelings and does not allow the possibility of ‘empirical’ research.

The fourth ontological assumption: ‘Reality as symbolic discourse’ represents reality not as a set of rules, but as embedded in the meanings and norms which are created through individual experiences of events and situations. These meanings and norms are the reality of social research. Here, the meanings and norms structure the social practices of individual human actors.

While ‘Reality as symbolic discourse’ is concerned with the meanings and norms which comprise social structures and thereby shape individual actions, the fifth ontological assumption, ‘Reality as social construction’, views the social world as created and re-created by the actors and reality as the accomplishment of individual sense-making. Therefore, the action of an employee is the focus of research.

Assumption 5: ‘Reality as social construction’ is the best concept within which to state my position because it focuses on the actions of employees, and not just on the meanings and norms.

### **5.2.3. Anti-positivism-positivism: the epistemological debate**

From this perspective, the ontological assumptions are linked to epistemological assumptions which are concerned with the way in which knowledge can be gained about human beings. Burrell and Morgan (1979) use the term ‘positivist’ to characterise epistemologies which try to explain what happens in the social world by searching for regularities and causal relationships between its fundamental elements.

Positivist epistemology is based upon the natural sciences. It focuses on hypothesis testing and accepts that the development of knowledge is fundamentally a cumulative process in which new insights are added to the existing stock of knowledge and false hypotheses removed.

The epistemology of anti-positivism possibly will take several forms, but understands the social world from the interpretations of the individuals who are directly involved in the activities under investigation. Social science is basically seen as a subjective rather than an objective view, because a researcher has to understand from

the inside rather than the outside. In this regard, I reject pure positivism as it only focuses on the outside.

#### **5.2.4. Voluntarism-determinism: the ‘human nature’ debate**

The above-mentioned ontological and epistemological assumptions are connected with a third group of assumptions regarding human nature.

As the social science theories seek to understand human activities, they need to consider whether humans are determined by the situation or the environment that they are in (‘determinist’), or whether they are completely free-willed and independent (‘voluntarist’), or whether there is a standpoint that allows for the influence of both (Burrell and Morgan, 1979).

The standpoints are important elements in social scientific theories, because they express in broad terms the nature of the relationships between the human and the society that he lives in (Burrell and Morgan, 1979). Therefore, the standpoint influence of both is suitable for my thesis. Rules both structure social behaviour, and the outcome of social behaviour (Ryan et al., 2002). “In other words, social structures are recursive in that they are both a condition and a consequence of social action” (Ryan et al., 2002, p. 86).

According to Hughes (2010, p. 60) one of the useful initial questions of why organisation change is developed by McLoughlin (1999, p. 69)

“is change within organisations an essentially adaptive activity determined by broader economic and technological imperatives or a consequence of organisation-specific processes of choice and politics?”

An important aspect of determinism is the emphasis upon cause-effect relationships (Darwin et al. 2002, cited in Hughes, 2010). For example, organisational change is determined by the economic environment. Whereas voluntarism emphasises managerial choices and actions that influence organisational change.

Hughes (2010) indicated that a hybrid of these two positions is likely than only focusing on one and ignoring the other.

### **5.2.5. Ideographic-nomothetic theory: the methodological debate**

The three sets of assumptions concerning ontology, epistemology and human nature outlined above are associated with a fourth set of assumptions regarding methodology.

“[T]he selection of an appropriate research methodology cannot be done in isolation of a consideration of the ontological and epistemological assumptions which underpin the research in the question” (Ryan et al., 2002, p. 35).

In the same context, Burrell and Morgan (1979) distinguish between two types of methodologies: the ideographic and nomothetic.

The ideographic approach focuses on exploring human background and life history by ‘getting inside’ situations and involving everyday life in order to understand the nature and characteristics of humans during the process of investigation. However, the nomothetic approach focuses on testing hypotheses and places weight on systematic protocol and technique to base the research. Therefore, I reject the nomothetic approach and only focus on the ideographic approach.

### **5.2.6. The Regulation-Radical Change Dimension**

Burrell and Morgan (1979) developed the regulation-radical change dimension. The sociology of regulation is concerned with providing explanations of why society tends to hold together rather than fall apart. In contrast, the sociology of radical change is concerned with providing explanations for why the radical change happens (Burrell and Morgan, 1979). The distinction between the regulation and radical change has received great attention and has come to be known as the ‘order-conflict debate’ (Burrell and Morgan, 1979).

The nature of society can be approached from the standpoint of the order-conflict debate (Dahrendorg, 1959, as cited in Burrell and Morgan, 1979). On the one hand, the order view of society stresses stability, integration, functional co-ordination and consensus. On the other hand, the conflict view of society emphasises change, conflict, disintegration and coercion (Dahrendorg, 1959, as cited in Burrell and Morgan, 1979).

Cohen (1968) criticised the distinction between the order and conflict models, and he mentioned the possibility of mixing these two models (Burrell and Morgan, 1979). Alternatively, the order and conflict models can be viewed as two sides of the same coin (Cohen, 1968, as cited in Burrell and Morgan, 1979). The regulation and radical change dimensions are shown in Table 5.2 below.



**Table 5.2 The Regulation-Radical Change Dimension**

The Sociology of REGULATION is Concerned with:	The Sociology of RADICAL CHANGE is Concerned with:
(a) The status quo	(a) Radical change
(b) Social order	(b) Structural conflict
(c) Consensus	(c) Modes of domination
(d) Social integration and cohesion	(d) Contradiction
(e) Solidarity	(e) Emancipation
(f) Need satisfaction	(f) Deprivation
(g) Actuality	(g) Potentiality

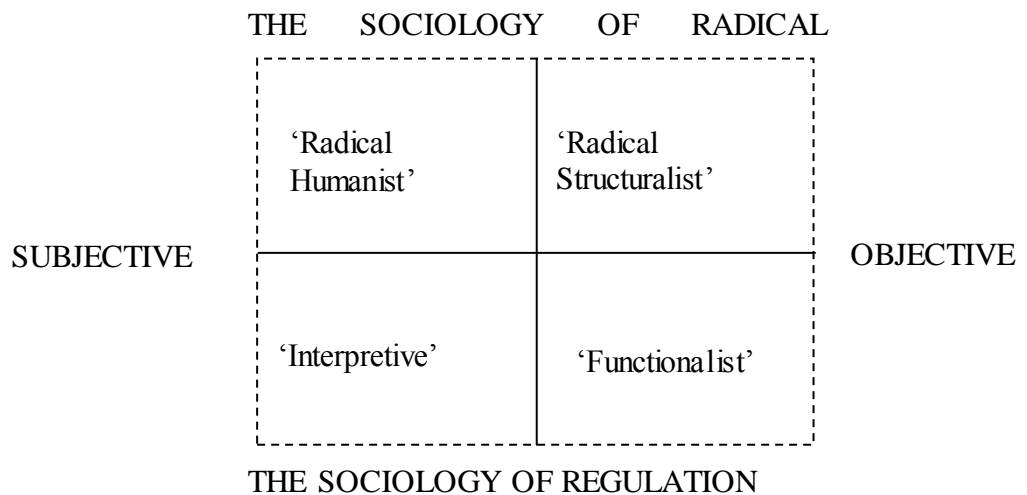
Source: (Burrell and Morgan, 1979, p. 18)

### **5.3.Burrell and Morgan's Two Dimensions: Four Paradigms**

The above shows two dimensions of Burrell and Morgan's (1979) framework: the subjective-objective dimension of the nature of social science and the regulation-radical change dimension of the nature of society.

The distinctions between the two dimensions were ignored in sociological debates during the late 1960s (Burrell and Morgan, 1979). Therefore, Burrell and Morgan (1979) connected the two dimensions to discuss the relationships between them and to develop a coherent scheme for the analysis of social theory. Figure 5.3 below shows the result of the two dimensions for research paradigms.

**Figure 5.3 Four paradigms for the analysis of social theory**



Source: (Burrell and Morgan, 1979, p. 22).

The vertical axis represents the radical change dimension and the horizontal axis represents the subjective-objective dimension. The four research paradigms are: functionalist, interpretive, radical humanist and radical structuralist. Each of the four paradigms grasps different views about the social world (Burrell and Morgan, 1979). Therefore, they conclude that these four paradigms can be used to analyse many social theories.

### **5.3.1. The Functionalist Paradigm**

The functionalist paradigm is located in the bottom right quadrant of Figure 5.3 above and it combines an objectivist view of the social world with the sociology of regulation. The social science feature of the functionalist paradigm is rooted in sociological positivism, which utilises the models and methods of the natural sciences to investigate human behaviour (Burrell and Morgan, 1979). Burrell and Morgan (1979, p. 26) state that functionalism is distinguished by “concern for providing explanations of status quo, social order, consensus, social integration, solidarity, need satisfaction, and actuality”. Theories in this paradigm reject the view that actors are needed to understand

society. According to Burrell and Morgan (1979), functionalism is unable to deliver explanations for social change.

My thesis rejects the functionalist paradigm because it ignores the view of actors to understand society.

### **5.3.2. The Interpretive Paradigm**

The interpretive paradigm is located in the bottom-left quadrant of Figure 5.3 above and it represents a view which is rooted in the sociology of regulation and an objectivist view of the social world. Unlike the functionalist paradigm, this paradigm approaches from a subjectivist point of view with a nominalist ontology, an anti-positivist epistemology, a voluntarist model of human nature and an ideographic methodology.

Burrell and Morgan (1979) argue that the interpretive paradigm is concerned with understanding the world as it is. In addition, it tries to find explanation inside the realm of individual consciousness and subjectivity. My thesis use the interpretive paradigm, because it concerned to understand the world.

However, there are some limitations of this paradigm. From an ontological point of view, according to Burrell and Morgan (1979), the ontological assumptions of an interpretive paradigm exclude a direct interest in the issues involved in the order-conflict debate. As they state:

“The problems of conflict, domination, contradiction, potentiality and change play no part in their theoretical framework.” (Burrell and Morgan, 1979, p. 31).

The interpretive paradigm challenges the ontological assumptions of functionalist approaches and the study of organisations (Burrell and Morgan, 1979).

Burrell and Morgan (1979) further explain that the interpretive paradigm is much more focused on obtaining an understanding of the subjectively created social world 'as it is' in terms of an ongoing process.

From an epistemological point of view, according to Burrell and Morgan (1979), the epistemological assumptions of interpretive paradigm exclude the observer. It has been generally noted that interpretive management accounting research plays an active role in explanation (e.g. Ryan et al., 2002, Ahrens, 2008, Ahrens et al., 2008, Kakkuri-Knuuttila et al., 2008b.). However, given my explanation and interpretation of the paradigm above, this paradigm rejects any role of the researcher. Therefore, in my thesis I use an adapted version of interpretivism, where I play an active role in explaining the acceptance of, or resistance to, an ERP system, on that I use both deductive and inductive approaches in order to give me the flexibility I need to direct my research and increase my understanding (see Section 5.5. below).

Therefore, the view of Burrell and Morgan (1979): overcoming the limitations of the interpretive paradigm, can be helpful to study organisations.

### **5.3.3. The Radical Humanist Paradigm**

The radical humanist paradigm, which is located in the top-left quadrant of Figure 5.3 above, is based around the subjective dimension and the sociology of radical change. This approach views the social world from a perspective, which tends to nominalist ontology, an anti-positivist epistemology, a voluntarist model of human nature, and an ideographic methodology. In addition, as the radical humanist is located

within the sociology of radical change, it stresses radical change, modes of domination, emancipation, deprivation and potentiality (Burrell and Morgan, 1979).

This paradigm shares some of the characteristics of the interpretive paradigm being located in the subjective dimension and it stands in total opposition to the functionalist paradigm, as they have different assumptions concerning the nature of social science and society.

My thesis rejects the radical humanist paradigm for several reasons. The first reason is that the radical humanist paradigm focuses on radical change. The second reason is that the radical humanist paradigm, like the interpretive paradigm, focuses too much on human consciousness and rejects an objective view or the role of observer. “The radical humanist perspective places central emphasis upon human consciousness” (Burrell and Morgan, 1979, p. 33).

#### **5.3.4. The Radical Structuralist paradigm**

The radical structuralist paradigm is located in the top-right quadrant of Figure 5.3 above. This paradigm is characterised by its concern to develop a society of radical change from an objectivist point of view. The radical structuralist paradigm is similar to the functionalist paradigm view of the social world from an objectivist standpoint. Moreover, this paradigm shares its assumption about the nature of society with the radical humanist paradigm. However, the radical structuralist paradigm is located in total opposition to the interpretive paradigm.

Therefore, this paradigm follows the objective dimension. It tends to be underpinned by realist ontology, a positivist epistemology, a deterministic view of human nature and a nomothetic methodology. The radical structuralist paradigm “is

committed to radical change, emancipation, potentiality, structural conflict, modes of domination, contradiction, and deprivation” (Burrell and Morgan, 1979, p. 34).

For a radical critique of society, the radical humanists focus on ‘consciousness’, whereas the radical structuralists focus on structural relationships inside a realist social world, and look for explanations of the basic interrelationships within the context of the social world. Different scholars stress the role of different social forces in explaining the social change, but others focus on the structure and analysis of power relationships (Burrell and Morgan, 1979).

My thesis rejects the radical humanist paradigm for several reasons. It ignores the view of actors to understand society.

#### **5.4. Research Paradigms for the Present Study**

The previous sections showed four paradigms as discussed by Burrell and Morgan (1979), regarding the extreme position of the nature of the social science and the nature of society. My thesis can benefit from the paradigms by addressing the limitations of the interpretive paradigm. The research question plays an important part in deciding which philosophical domain is better than the other (Saunders et al., 2009).

As suggested by Saunders, Lewis and Thornhill (2009), in relation to the role of the research question, my thesis focuses on exploring the factors that influence employees to accept or resist ERP systems. It examines the implementation of an ERP system in two companies, attempting to understand why and how management are able to maximise the success of the implementation and minimise resistance to the change through theoretical and practical development.

My ontological stand point takes reality as a social construction. This view is in line with the suggestion of Burrell and Morgan (1979), who argue that society and structure play a role in understanding organisations. In this regard, reality is not nominalist – that is only in people’s minds; rather, it is explicit as suggested by (D’Adderio, 2009, 2011; Becker and Zirpoli, 2008; and Iannacci and Hatzaras, 2012).

Following from that, and from an epistemological perspective, I reject positivism. I see the factors that influence change or resistance as not forming linear relationships. Instead, humans play an important role in change, as in the implementation of an ERP system; and in the extent to which they accept and work with, or reject and resist, any such change.

From a human nature perspective, I see humans as both ‘determinist’ and ‘voluntarist’. That is to say, they are determined by situation or environment and they have free-will. This view is mentioned by Burrell and Morgan (1979).

From a methodological perspective, I reject the nomothetic approach because it places too much emphasis on testing hypotheses and systematic protocol and technique, but I accept the ideographic approach because the background and life history of humans play an important part in their understanding. My understanding of people, their behaviour and activities and the reasons behind them were developed during the research process of my thesis. Many scholars assert that researchers can use both the inductive and deductive approaches in an investigation e.g. (Burrell and Morgan, 1979, Saunders et al., 2009, Dubois and Gadde, 2002, Lukka and Modell, 2010, Yin, 2009).

## **5.5. Research approach**

The following will show the approach of my thesis. In particular it explores the traditional and transdisciplinary approaches of production of knowledge. Saunders, Lewis and Thornhill (2009) indicate that the research approach is important for many reasons. For example, research approach influences the research design and it will help on choosing research strategies.

Knowledge production can be divided into two modes:

‘Mode 1’ is the ‘traditional’ approach. Researchers generate knowledge following existing institutions and academic disciplines. (Gibbons et al., 1994; cited in Thorpe and Holloway, 2008).

Researchers who follow Mode 1 tradition generally collect their data through surveys and quantitative models. Mode 1 may not lead to robust and interesting theories, because researchers need some element of practical relevance. Nonetheless, focusing only on this approach can disregard the practical relevance and the political and cultural differences between countries.

‘Mode 2’ is ‘transdisciplinary’ approach. Researchers generate knowledge in a specific context that values those involved in practice and aims to co-produce knowledge (Gibbons et al., 1994; cited in Thorpe and Holloway, 2008). Therefore, produce knowledge following Mode 2 occurs as a result of the interaction that takes place between theory and practice. Thorpe and Holloway (2008) call for collaborative research, and co-production of knowledge following Mode 2.

Interestingly, Thorpe and Holloway (2008) indicate that educational institutions can be key to the competitive advantage, if they recognize ‘management students’ and



their sponsoring organisations as knowledgeable practitioners who are in a position to: test theories in new contexts, evaluate models and challenge past interpretations.

Therefore, there is link between PhD students and international dimension in future research. My thesis can increase our understanding of the change on the organisation and the individual by collecting evidence on how managers manage employees and what factors influence individuals for example to accept or reject an ERP system. Companies in developed countries such as Germany, which provides ERP systems for developing countries may not benefit from my research, which is based on the experience of developed countries, because there are different factors which affect the employee, such as culture, power and politics.

Therefore, I took into account the fact that the design of thesis should follow Mode 2, as it has the potential to produce knowledge and cooperation between PhD students and supervisors in the business school. For example, the supervisor can be seen as an expert in the theory in developed countries, and I am as an expert in the factors affecting the employee in Saudi Arabia.

My research design found as outlined in Chapter 5.5.3. helps both the researcher and supervisor to test theories in the 1<sup>st</sup> empirical work and extend the theories for testing in the 2<sup>nd</sup> empirical work. Therefore, my design does not follow a pure deductive or inductive approach, but it uses an abductive approach where I placed induction and deduction in a complementary rather than competitive context.

### **5.5.1. The abduction approach**

The above discussed two approaches of production knowledge. My thesis uses ‘Mode 2’: ‘transdisciplinary’ approach since it allows the cooperation between

supervisors and PhD students. Pure deductive and inductive approaches are not suitable for 'transdisciplinary' approach as it explained above. Therefore, my design does not follow a pure deductive or inductive approach, but it uses an abductive approach, where I placed induction and deduction in a complementary rather than competitive context.

My research design found as outlined in Chapter 5.5.3. helps both the researcher and supervisor to test theories in the 1<sup>st</sup> empirical work and extend the theories for testing in the 2<sup>nd</sup> empirical work.

Dubois and Gadde (2002) use the abductive research strategy when they explain their 'systematic combining' module. On that the investigator continually reviews his analytical framework by moving from empirical material to theory and then back again.

The systematic combining contains two processes which are influenced by four factors. The first process is matching theory and reality. The second process is direction and redirection. While the four factors are "What is going on in reality, available theories, the case that gradually evolves, and the analytical framework." (Dubois and Gadde, 2002, p. 554).

Matching theory and reality is done by going back and forth between framework, data sources, and analysis (Dubois and Gadde, 2002). Matching theory is important, and it could not be done by a purely inductive or deductive approach (Kakkuri-Knuuttila et al., 2008a and b).

Dubois and Gadde (2002, p. 555) identify two types of data: 'active' and 'passive'. The passive data is that which the researcher sets out to find, while the active data is linked with discovery, for example investigating a behaviour that I observed inside the case companies. Dubois and Gadde indicate that passive data can come across

active data, and that active data will require a more passive (less predetermined) researcher.

In my thesis the passive data explained Burns and Scapens' (2000) framework of the relationship between the routine and resistance, and the explanations of many factors on acceptance of, or resistance to, an ERP which are identified by many studies such as trust (Busco, Riccaboni and Scapens, 2006), power (Yazdifar, et al., 2008) and strong and weak ties (Masquefa, 2008).

The passive (secondary source/extant literature) data was helpful in assessing the findings of the active (primary source material) and where I looked specifically for the evidence of acceptance of, or resistance to, an ERP system. I then started to build themes based on both passive and active data<sup>8</sup>.

Dubois and Gadde (2002) indicate that forcing data to fit theory must be avoided. In my thesis I develop a general framework based on Burns and Scapens' (2000) framework which shows possibility of different relationships between external and internal influences and between stability and change as it shown at the end of my thesis. Now the framework can observe new findings. The other findings which do not fit in this framework has to be thought about and maybe a literature review is needed to explain the new findings For example, Feldman and Pentland (2003) which state

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<sup>8</sup> Chapter 5: "Table 5.5 Case Study Tactics for Four Design Tests Source" discusses the case studies.

stability could bring change. This is an illustration of what Dubois and Gadde (2002) mean by the matching process.

However, Dubois and Gadde (2002) indicate two difficulties with matching theory with reality. Matching processes have no evident patterns, could lead to many directions, and besides the processes cannot be known in advance.

While the second process of the systematic combining is direction and redirection. Dubois and Gadde (2002) indicate that the focus of systematic combining is on using more than one source of evidence and discovering new dimensions of the research problem.

In the 2<sup>nd</sup> empirical work I interviewed more and less experienced employees. I discovered that the more experienced interviewees wanted to hide some information. My thesis have major change on the directions; it started with the theory which was to focus on the process of change inside organisations; the literature review which focused on the agent and relationships not only factors; 1<sup>st</sup> empirical work which focuses on the type of the relationships between factors and agent; literature review after the 1<sup>st</sup> empirical work which focuses on the influence of stability on resistance and change; the 2<sup>nd</sup> empirical work which investigates the findings from the evidence and searches for more explanation that gives deeper understanding for resistance and change.

### **5.5.2. Factors related to the two processes of systematic combining**

The above showed the two processes of the systematic combining. The following will show four factors that influence the two processes. The first factor is 'the boundaries in the empirical world'. It means what parts of the empirical world should be addressed in the case. Dubois and Gadde (2002) identify a problem with boundaries that

there are no natural boundaries. However, reality needs some way to be defined. Maybe the theory could help in defining the boundaries.

The second factor is 'The role of the theory'. Dubois and Gadde (2002) indicate that the issue is not to start from theory or start from the empirical work; rather the theory and the case evolve over time. Dubois and Gadde (2002) indicate that the literature review could help to find black holes or could lead to white spots.

When I use Burns and Scapens' (2000) framework I found other aspects than stability which leads to resistance for example, Scapens (2006) indicates that trust and power can also explain the acceptance of, or resistance to, an ERP system. I did two case studies in order to have much time to match theory with reality and direction and redirection of my thesis.

The third factor is 'The evolving case'. Dubois and Gadde (2002) indicate that the case can be seen as a 'tool', because the case evolves during the study to a 'product'. Designing the case study could help to change the final case.

My thesis gains much insight to design the case studies from Yin (2009) as it explains later. Dubois and Gadde (2002) indicate that the data from the case can be seen as pieces in a jigsaw puzzle. At first only a few pieces fit. By looking at the case as pieces of jigsaw this helped me to start to put pieces together. For example, the difficult pieces of the jigsaw I found when there is intentional resistance or change which were not included in the Burns and Scapens' (2000) framework. Therefore, I looked at it as an opportunity to extend my boundary of the empirical world and try to gather more evidence 'inductive'.

The fourth factor is 'The role of the framework'. Dubois and Gadde (2002) describe the types of the frameworks as tight and loose. The tight framework could not allow the researcher to see important aspects in the case. However, the loose framework could lead to data overload. Therefore, empirical finding could help to guideline the research, but the researcher needs to be open for many possibilities the theory does not have.

The framework and the case play a big part in explaining systematic combining. On that the research process develops by conflict between the evolving framework and the evolving case (Dubois and Gadde, 2002).

### **5.5.3. Research design**

There are many ways to write a report of the research study. Saunders, Lewis and Thornhill (2009) indicate that research purpose can be classified into exploratory, descriptive and explanatory. However, they indicate that the research question may have more than one purpose, for example, the way the research question is asked would result in either descriptive, descriptive and explanatory, or explanatory answers. The descriptive research is about preparing a profile of people, events or situations.

Saunders, Lewis and Thornhill (2009) indicate that when the focus is initially broad, exploratory studies can help to narrow the focus as the research progresses. Saunders, Lewis and Thornhill (2009) indicate that the exploratory research may be an extension of, or a forecast to, an explanatory research. It can help to have a clear picture of the phenomena prior to the collection of the data.

Explanatory studies establish causal relationships between variables (Saunders et al., 2009). They indicate that statistical tests such as correlation can be used in order

to get a clearer view of the relationship, or collect qualitative data to explain the reasons.

The following explains my research design of my thesis. Research design plays an important part in telling the story. It links different chapters of my thesis together showing their development and considering how my research process unfolds many dimensions and stages of research design.

Research design is a plan for moving from here to there, where ‘here’ could be defined as questions and ‘there’ could be defined as conclusions answering those questions (Yin, 2009); thus, research design can be seen as including a research strategy. Similarly, Saunders, Lewis and Thornhill (2009) define the research design as the general plan of how the researcher will go about answering his research question(s). Research design is a general and repeated process, joining fundamental aspects. For example, the primary assumptions of the researcher with more detailed aspects, such as the research topic, theory, methods to collect data and techniques to analyse data (Yin, 2009).

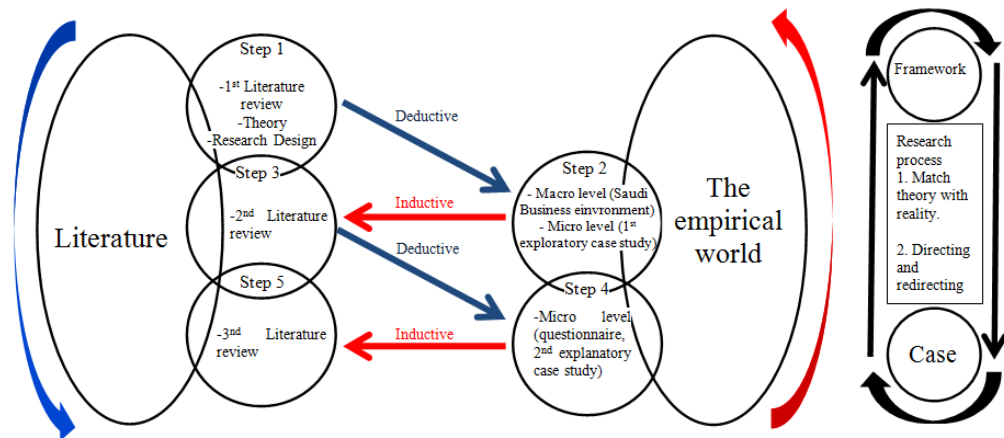
Theory plays an important part in the story. One of the definitions of theory is:

“Theory emphasises the nature of causal relationships, identifying what comes first as well as the timing of events” (Sutton and Staw, 1995, p. 375, as cited in Saunders et al., 2009)

My thesis consists of nine chapters organised in three parts according to the structure developed in this section. This section discusses in three stages the emergent components of my thesis, in particular the unit of analysis and the theoretical framework. The three stages that I develop in Figure 5.4 to extend Dubois and Gadde’s (2002) model (see also appendix 4.1: Poster in research process). In order to arrive at

the results presented in the next section, my thesis developed and presented an argument.

**Figure 5.4 Research design**



Source: Extending Dubois and Gadde' (2002) model

Graphically, the decisions, from the general question to the specific contributions, is presented in Table 5.3. This table contains five columns. The first column presents three stages. Each stage took about 10 to 12 months. The second column presents the enquiry of each step. The third and fourth columns reflect the explanations for the argument that holds together various parts of the story. They come from the literature and from the empirical work and are presented in the third and fourth column respectively. The fifth column presents my results and the decisions that I made. As such, it forms the backbone of the “story” told in my thesis. However, I combined the three literature reviews together at the end of my investigation to allow a clearer view of the objective of my thesis.



**Table 5.3 The PhD Thesis on One Page**

Stage	Questions	Literature/ Theory	Empirical work	Matching theory and reality/ Direction and redirection
I	Identify the level of theory	Theory		External and internal context are important
	Explore the literature	1 <sup>st</sup> literature		No agreement on the causes. Agent has role.
	Identify research design and strategy	Research design		Use case study. Use interpretive approach.
II	Identify external aspects		Saudi business context	Explore political, economic, cultural influences
	Identify Internal aspects		1 <sup>st</sup> empirical work	Identify causes. Routine influence change and resistance. Build theoretical framework
	Describe and compare relevant studies to the findings	2 <sup>nd</sup> literature		Intention and unintentional action of employee
III	Examine the theoretical framework		2 <sup>nd</sup> empirical work	Build theoretical framework
	Compare the theoretical framework to existence literature	3 <sup>rd</sup> literature		Answer the question. Identify the contribution to the literature.

Source: developed by the author

The first stage focuses on the foundation of my thesis in terms of choosing management accounting change as a topic and becoming familiar with the current issues that have been discussed in the literature. The second stage of research strategy empirically questioned and re-examined research topics and theories. The third stage of research strategy empirically investigates the new research questions that were developed in stage two.

## 5.6. Research Methods

In the first part of this chapter, I discussed research philosophies and research approaches. In this part, I will focus on my choice of data collection method.

Five methods could be used to conduct research data (Yin, 2009). These methods are experiment, survey, archival analysis, history and case study. Yin (2009) states that the use of each method is linked to three conditions, these are:

“(a) the type of research question posed, (b) the extent of control an investigator has over actual behavioural events, and (c) the degree of focus on contemporary as opposed to historical events” (Yin, 2009, p. 8).

Table 5.3 below shows the five main research methods and the three conditions of each method. The three conditions could influence the three purposes of every research method, which are exploratory, descriptive and explanatory (Yin, 2009).

**Table 5.4 Relevant Situations for Different Research Methods**

Method	(1) Form of Research Question	(2) Requires Control of Behavioural Events?	(3) Focuses on Contemporary Events?
Experiment	How, why?	Yes	Yes
Survey	Who, what, where, how many, how much?	No	Yes
Archival Analysis	Who, what, where, how many, how much?	No	Yes/no
History	How, why?	No	No
Case Study	How, why?	No	Yes

Source: (COSMOS Corporation, as cited in Yin, 2009, p. 9).

These conditions imply that the case study method is useful when there is a need to study a contemporary phenomenon, which is not controlled. These conditions help to distinguish sociologically-oriented case study research from experiments which split the phenomenon under investigation from its context, from historical studies which do not study contemporary events, and from surveys which aim to limit the number of variables under study (Yin, 2009).

The experiment method is rejected for my research because it requires control over the events. The survey as the main method is rejected because it focuses on an empirical level where the objective of my thesis is on the actual level. In the other words, a survey is not suitable for direct questions to other issues that the researcher did not think of. Archival analysis and history are not the main method for my thesis because, where I use documentation, I focus on contemporary documents from the two companies. The case study is therefore most suitable.

Yin (2009) provides a twofold, technical definition of case studies. The first part begins with the scope of a case study:

- “1. A case study is an empirical inquiry that
    - investigates a contemporary phenomenon in depth and within its real-life context, especially when
    - the boundaries between phenomenon and context are not clearly evident.”
- (Yin, 2009, p. 18).

Thus, the first part indicates that a case study could be used to understand a real-life phenomenon in depth. This helps to distinguish case studies from the other research methods. The second part of the definition focuses on technical characteristics, including data collection and data analysis strategies:

- “2. The case study inquiry
    - copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
    - relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
    - benefits from the prior development of theoretical propositions to guide data collection and analysis”
- (Yin, 2009, p. 18).

There are other definitions of case study, which have similar meaning to the definition of Yin (2009).

“Case study as ‘a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence” (Robson, 2002, p. 178, as cited in Saunders et al., 2009, p. 145).

Both Yin (2009) and Saunders et al. (2009) agree that a case study could be used to understand a real-life phenomenon, using multiple sources of evidence.

### **5.6.1. Limitations of case study**

There are a number of limitations of the case study method. The first limitation is linked to the investigator; the investigator could be disorganised, has not followed systematic procedures, or has allowed unclear evidence or biased views to influence the direction of the findings and conclusions (Yin, 2009). Moreover, some investigators simply provide rich descriptions of events and readers are expected to come to their own conclusions (Easton, 1995, as cited in Dubois and Gadde, 2002). Therefore, there is need for the interpretation of those events and that I will be engaging in such interpretation of the events and data from my research.

The second limitation of a case study is: limited ability for scientific generalisation. However, Yin (2009) states that case studies do have the ability to be generalizable, albeit to theoretical propositions rather than populations. The third limitation of a case study is that they are time consuming and labour intensive. The fourth limitation of a case study is that obtaining access to an organisation could be problematic and time-consuming (Bonoma, 1985, as cited in Kholeif et al., 2008). In fact, I faced this problem in my study when there was no response to my initial request to do the case study. I had to contact higher-level management to allow access to the company. The fifth limitation of a case study is that a researcher might be given access to only some of the data, meaning that the complete story could be hidden in different

corners of the company (Busco et al., 2007). The sixth limitation is that it requires substantial resources as well as researcher patience (Johansson and Siverbo, 2009) and resilience, as suggested above.

Although there are many limitations, this is not to say that a case study is a weak method. However, it is important to increase our understanding of the methods that are used and to be aware of the limitations to deal with them in practice. For instance, I started the process of obtaining access to the two case studies two years in advance. This meant that I was able to use different approaches, both formal and informal, to get that access. Furthermore, I had to find a case study near my home (in Saudi Arabia) because I had limited resources in terms of money and time to conduct the case study.

The next section will focus on the benefit and my justification for using a case study as a method.

### **5.6.2. Benefits of the exploratory case study**

Yin (2009) identified many benefits of using a pilot case study, for example, for researcher training, to know which documents might be relevant for further inquiry, to identify cases and to arrange access to case studies. Another benefit of the pilot study is, as Yin (2009) indicates, that pilot reports could help the research design and field procedures.

In the context of my research, the 1<sup>st</sup> empirical work helped to identify the internal and external aspects of change or resistance since employees explained how the change or resistance takes place. Comparison between the employees' explanations and those suggested by the Burns and Scapens' 2000 framework has helped in developing the theoretical framework of my thesis. In brief, the 1<sup>st</sup> empirical work was useful to test

the claims of the theory, as well as to provide an opportunity to explore new issues that were not included in the Burns and Scapens' (2000) framework.

There are also other benefits from conducting an explorative study, for example, providing an opportunity for the development of research. The development of research is done by directing and redirecting my research focus, based on the results of explorative case study work.

A consequence of using interviews in my research helped me to notice the actions of some managers and how the Manager of Change Management dealt with such behaviour. If I did not use the preliminary interviews I would probably not be able to know about the behaviour of the Manager of Change Management team and some other managers, and the associated impact that it had on the change process. It became clear to me, employees do not just follow orders, but there are other factors that influence their actions and it is important to explore those factors: how those factors influence the action of employees and how the employees influence the change and resistance to an ERP systems.

## **5.7.Assessing Evidence**

There are some tests that researchers can use to evaluate the quality of their studies' design (Yin, 2009). The four tests are: construct validity, internal validity, external validity and reliability. Table 5.4 below shows the four tests and the tactics that I used:

**Table 5.5 Case study tactics for four design tests**

Tests	Case study tactic	Stage of research
Construct validity	Use multiple sources of evidence Establish chain of evidence Have key informants review draft case study report	Data collection Data collection Composition
Internal validity	Do pattern matching Use logic models Do cross-case synthesis Address rival explanation	Data analysis Data analysis Data analysis Data analysis
External validity	Use theory in single case studies Use replication logic in multiple case studies	Research design Research design
Reliability	Use case study protocol Develop case study database	Data collection Data collection

Source: (Yin, 2009, p. 40)

I will now discuss their importance in the context of my research. The first test is ‘Construct validity’. This test concerns identifying accurate effective measures for the issues being studied. The validity of research could be influenced by the bias of the investigator in any type of research. In this regard, different sources could increase the validity of evidence.

Therefore, my thesis increases the validity by using many sources of evidence such as interviews from two case studies, in-company observations and organisational documents enabling a sequence of evidence. Appendix 8.4 shows an example of linking questions to answers from different sources of evidence.

The second test is ‘Internal validity’. This test seeks to demonstrate a causal relationship, in which it is believed some of the conditions lead to other conditions. Internal validity could be compromised when the investigator does not include other factors that have to be part of the analysis of the causal relationship (Yin, 2009).

Therefore, in order to increase the robustness of internal validity for my research it is necessary to identify the fundamental issues in developing a case description. The

fundamental issue in my research is the influence of the behaviour of employees on change or resistance, rather than the assumed linear influence of factors such as limitation of ERP systems on resistance.

Moreover, the fundamental issue should be included in the analysis to bring the most important aspects of the situation under consideration. The logic model could be used to represent the data. In doing this, I have used three analytic techniques and examined rival explanations and these are discussed in more detail in section 5.8. (Data Analysis) below.

The third test is 'External validity'. This test is focused mainly on the ability of analytical generalisation of a specific set of results of the case study to some broader theory. The external validity can be increased by including theory in my research design and the analysis of the literature review as rival explanations. Supporting and challenging these rival explanations based on new data is likely to increase the strength of external validity. Since rival explanations help to discover other factors that influence change and resistance. Also, rival explanations help to explain how mistakes in information that is provided by an ERP system and the influence of senior management lead to change rather than resistance as indicated by Besco et al., (2006).

In other words, appropriate literature should be fully considered – all studies that experience the problem of the issue under consideration – including the method of interpretation and results.

The investigator must be aware of how to use the knowledge and previous experience of the literature review (Yin, 2009). In the case of my research, as I imagine for most PhD students, this was difficult as I had limited experience of deciding what



part of the literature is important or how to present the data in a form that serves the interest of the main research question.

The breadth of the literature review process that I adopted significantly helped in every aspect of my research starting from the methodology and ending with the design of the case study.

Thus, my thesis considered the literature in Chapter 3 at different times: before the 1<sup>st</sup> empirical work; before the 2<sup>nd</sup> empirical work, and after the 2<sup>nd</sup> empirical work. Many alterations occurred during my research project and many changing of directions and redirections happened during my research analysis. For example, I coded the data according to factors that influenced the stability, change and resistance, but when I first reviewed the literature I did not focus on coding the literature according to the relationships between causes and change or resistance. This happened because, as explained above, the focus of what was important was under development. Therefore, I had to go through the literature review process again in order to capture previously unrecognized elements and to express the data according to the relationships between factors and the action of agency.

The above discussion shows three tests of validity in the context of using the case study in research. The next section focuses on the reliability of a case study.

The fourth test is 'Reliability'. The test for reliability concerns the ability to have the same result by repeating the process of the data collection. The intention of the test is to reduce errors and biases in the study.

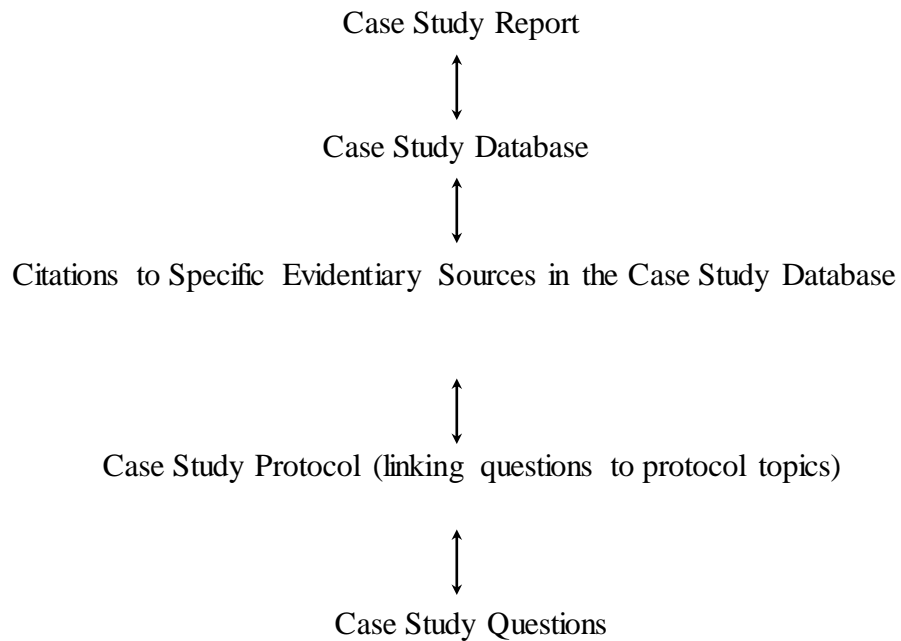
First, as regards to reliability of case study research: this can be increased by documenting the different stages of the work (Yin, 2009). Yin provides two methods: developing a database of the case study and using case study protocol.

My thesis increases the reliability by using the database method as explained earlier under 'Construct validity'. Case study protocol is also used, which is discussed in the empirical section (See Chapter 7 and Chapter 8). The protocol is simply the procedures and general rules that the investigator follows when collecting the data (Yin, 2009).

Furthermore, by maintaining a chain of evidence the reliability and construct validity will increase as will the overall quality of the case study (Yin, 2009).

I maintained a chain of evidence by documenting and analysing data from different sources of evidence separately; and by coding the data by linking it to my research questions and to the basic case study report. Therefore, I could follow any evidence from research questions to the conclusion of the study. Figure 5.5 below, by Yin (2009), shows how a chain of evidence was maintained in my study. It also illustrates that the database is located in the middle between the questions and the report.

**Figure 5.5 Maintaining a Chain of Evidence**



Source: (Yin, 2009, p. 123).

Second, I increased the reliability of the literature review, for example the ‘capture’ of appropriate literature, by using a database to record the literature and using Dubois and Gadde’s (2002) model of research. Section 5.5.3 explores the research design in detail.

Analysing evidence is a fundamental stage of any empirical research. The next section discusses data analysis.

## **5.8.Data Analysis**

There are five analytical techniques that can be used to analyse the case study. These are pattern matching, explanation building, time-series analysis, logic models and cross-case synthesis. I use pattern matching, logic models and cross-case synthesis.

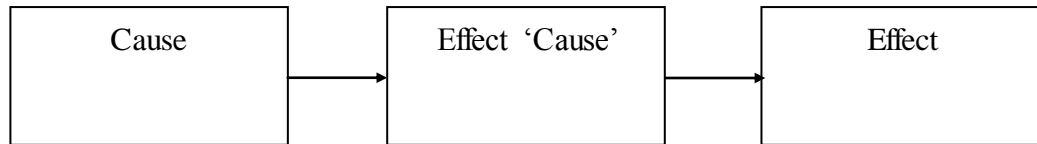
I rejected the ‘explanation building’ technique because Yin (2009) shows that it has two limitations. From an operational perspective there is no well-documented guide for using explanation building with explanatory case studies. As a result, there could be a problem of deflecting from the original topic of the case study.

I also rejected ‘time-series analysis’ because it focuses on a single dependent or independent variable. Since it emphasises particular factors to explain change or resistance. However, as discussion of the literature showed there is no single, particular factor that drives change. Therefore, using time-series analysis would probably ignore some factors, which may have great potential in explaining the change or resistance.

I will now explain the three techniques that I used in my research. The first technique is pattern matching. It can be used when the investigator is focusing on how and why a particular outcome occurred in a single case or in multiple cases. A main function of pattern matching is the accommodation of multiple interpretations into a single understandable pattern (Ahrens & Dent, 1998, p. 2, as cited in Kakkuri-Knuuttila et al., 2008a, p. 281). I use pattern matching in my thesis between questions in each case and between the two companies participation in my study.

The second technique is logic models. This technique aims to match events captured empirically from a case study with those expected in theory. It is similar to pattern matching, but has sequential stages. An earlier stage, the event (the dependent variable), becomes, in the next stage, a causal event (independent variable). The events are staged in continual cause-effect-cause-effect patterns. The Figure 5.6 below shows a simple logic model.

**Figure 5.6 Cause-effect-cause-effect patterns**



Source: developed by the author

In the context of the theoretical framework for this study, the importance of institutionalised behaviour, I argue, appears in the first stage. I highlight the cause-effect relationship, or, in other words, how the action becomes institutionalised. Included in the first stage of the analysis is logic and this is important. The interesting thing about institutionalised behaviour is that when the ‘cause’ in the first stage no longer exists, the action ‘effect’ in the second stage is not directly influenced by the ‘cause’ from the first stage. However, the action ‘effect’ is also influenced by the habit.

Some scholars, for example Nelson (2009), argue that the behaviours of employees constitute the building blocks of organisational routines, which helps to explain resistance and change. Therefore, I investigate the factors of ‘cause’, which influence the action (change or resistance), the ‘effect’ of agency, in the first stage, and I investigate in the second stage whether the action (resistance to or acceptance of change) ‘effect’ is the result of a particular factor or from a habit.

Yin (2009) indicates there is some limitations of the use of the logic model, because it seems illogical. It has many sequential stages which specify a particular series of events and may minimise the rival explanations.

Therefore, my thesis only uses two stages to avoid the limitation of the logic model. Stage one shows the external and internal factors – ‘the cause’ that influences

the action ('effect') of the agency. The action of agency is repeated over time and becomes a habit. Stage two shows how the habit ('the cause') influences the action ('effect') of the agency.

The third technique is cross-case synthesis. Having more than one case study can make the analysis of the findings easier and more robust than having one case (Yin, 2009). This technique treats each case study as a separate study.

Therefore, I have, in essence, treated each case study as a separate study and have used pattern explanation for each case in terms of the factors that influence the employees to resist or change. Then, I illustrate the patterns across the two case studies. Figure 9.2 shows the relationship between factors and the actions of employees.

Besides the analytical techniques there is examining rival explanations. Yin (2009) illustrates the confidence of placing the findings can be increased by addressing and rejecting rival explanations. Rival explanations simply mean that the final results could be due to factors other than known factors (Busco et al., 2006).

## **5.9. Collecting data**

Collecting evidence is a fundamental stage of any empirical research. Many scholars (Yin, 2009, Saunders et al., 2009, Patton, 2002) indicate that a case study can have many sources of data. There are six common sources of case study data: documentation, archival records, interviews, direct observations, participant-observation and physical artifacts (Yin, 2009).

Many studies in management accounting use case studies to investigate change and resistance (e.g. Kholeif et al., 2008, Sharma et al., 2010, Ribeiro, 2003, Scapens and

Jazayeri, 2003, Yazdifar, 2004, Busco et al., 2006, Yazdifar et al., 2008). My thesis uses interviews, direct observations, participant-observation and documentation.

The following paragraphs discuss how and why the companies involved in my research were chosen for the exploratory case study. Whilst attempting to establish contacts and arrange access, I request two companies for inviting their participation, but they rejected my requests. In the end, only the two companies included in the study responded positively to my request for access.

From my personal perspective, there was a secondary benefit from being able to access these two companies, which was the degree of personal contacts that I had within them. For example, in Company 2 there are a large number of accountants with whom I had contact through university, either because we had attended the same university, or I had taught them while they were at university. In Company 1, I had taught the son of the owners of the company. Also, there are geographical reasons why the companies were easier to access, their locations being near my home in Saudi Arabia.

### **5.9.1. Interviews**

According to Yin (2009), interviews are the most significant sources of data taken from a case study. Generally, there are three types of interviews: structured, semi-structured and unstructured (Saunders et al., 2009).

My thesis does not use the structured interview type because that type uses standardised questions, and does not allow for other questions, which are based on the answers given. Therefore, it does not provide an in-depth understanding (Saunders et al., 2009).

Both unstructured and semi-structured interviews were conducted. Indeed, more than one type of interview can be used (Saunders et al., 2009). Unstructured interviews were used in the 1<sup>st</sup> empirical work to help to identify the questions which should be asked in the semi-structured interviews in the 2<sup>nd</sup> empirical work. The unstructured interviews are informal, with no predetermined list of questions, but the researcher should have a clear idea about the aspects that need to be explored (Saunders et al., 2009).

There are a number of advantages of conducting unstructured and semi-structured interviews. For example, the researcher can adjust questions and investigate new ideas (Yin, 2009). For example, I could change the form of the question according to the different perspectives of people. Another advantage of interviews is that the interviewees can provide shortcuts to the previous history of such situations, and can help to identify other sources of evidence (Yin, 2009). Also, interviews allow the researcher to notice the reaction of interviewees, which can lead the researcher to issues that need to be investigated.

However, there are some limitations, which have been commonly indicated by scholars e.g. (Yin, 2009, Saunders et al., 2009). Unstructured and semi-structured interviews require a high degree of training, extended time and money, the size of the sample is usually small and there is risk of researcher bias (Yin, 2009).

### **5.9.2. Observation**

Observation as a method has been described from different perspectives, for example, Yin (2009) identifies two types of observation, which are direct observation and participant-observation. The direct observations take place in the natural setting of the 'case' where the researcher may develop questions and investigate them further in



interviews. However, the researcher as a participant-observer may have a role within a case study and will actually participate in the events being studied.

Saunders, Lewis and Thornhill (2009) identify two types of observations, which are participant observation and structured observation. The participant observation is considered a qualitative method, while structured observation is considered as a quantitative method, because it is concerned with the frequency of the actions of employees, for example.

Ryan, Scapens and Theobald (2002) describe the type of observations according to the five roles of the researcher in the case study. First, the role of the researcher is an outsider, who keeps his distance from the location of the case. Second, he is a visitor, who talks about issues being researched, but is not directly involved. Third, he is a facilitator; the researcher raises issues, gives advice and helps to identify problems and solutions, but does not provide solutions. Fourth, the researcher is a participant, who obtains insights into the everyday working of the company and has detailed records of his experiences. Fifth, the role of researcher is actor; he is directly involved in the company and in the process being researched, for example, introducing a new system or procedure.

My thesis makes direct observations and I play a visit role. Other types of observation are not applicable because I was not an outsider and did not take any part inside the company.

I found observation as a tool very helpful because it allowed me to develop my investigation on the interviews. The main limitation of observation is that my interpretation was limited to the empirical level, while the actual level needs more

exploration. Therefore, I learnt from the 1<sup>st</sup> empirical work that I should use more than one source of evidence to validate any data.

### **5.9.3. Documents**

The information that is found in documents is likely to be relevant to every case study topic (Yin, 2009). My thesis uses different forms of documents such as letters, e-mail correspondence, the company's website, personal notes, the company's annual report, formal studies of the same 'case' and articles appearing in newspapers.

Documents have some advantages, for example, researchers can view these documents at any time, but interviews have to be arranged. However, there are disadvantages of using documents, such as: they are not always accurate and free of bias. Therefore, documents need to be carefully used (Yin, 2009).

## **5.10. Conclusion**

The four chapters above aim to ground my thesis. Many lessons were learned from the literature review in Chapter 3 such as: the need to focus on the role of the individual agent; identification of the external and internal causes of change or resistance, and the need to focus on the micro context are all important to explaining reactions to change or resistance to change resulting from the introduction of ERP.

The literature review closed with a call for a need for a comprehensive framework for all these aspects of change and a need for 1<sup>st</sup> empirical work to identify factors that influence change and resistance in two case studies in Saudi Arabia.

The theoretical framework in Chapter 4 discussed three main Institutional Theories. It showed the weakness and strengths of those theories. Then it focused on

Burns and Scapens' (2000) framework and showed that many studies develop the framework to include external influences to explain why employees accept or resist new in management accounting systems.

Methodology and Method in Chapter 4 explored the philosophical position regarding the ontology, epistemology, human nature and methodology. Then, it showed the case study as a method and justified its use.

My ontological standpoint takes reality as a social construction in that society and structure play role on understanding organisation. In this regard, reality is not nominalist – that is only in people's minds; rather, it is explicit.

Following from that, and from an epistemological perspective, I reject positivism. I see the factors that influence change or resistance as not forming linear relationships. Instead, humans play an important role in change, as in the implementation of an ERP system; and in the extent to which they accept and work with, or reject and resist, any such change.

From a human nature perspective, I see humans as both 'determinist' and 'voluntarist'. That is to say, they are determined by situation or environment and they have free-will.

From a methodological perspective, I reject the nomothetic approach because it places too much emphasis on testing hypotheses and systematic protocol and technique, but I accept the ideographic approach because the background and life history of humans play an important part in their understanding. My thesis use an adapted version of interpretivism, where I examine the Burns and Scapens' (2000) framework and identify the factors that influence change in the 1<sup>st</sup> empirical work, while the 2<sup>nd</sup>

empirical work aimed to investigate the background and life history of interviewees. Therefore the thesis use both deductive and inductive approaches in the investigation (see section 5.4. and 5.5. above).

A case study is suitable for my thesis because it has the ability to 'explain' the assumed causal links in real-life interventions, which is too complex for the survey or experimental strategies.

The objective of the case study is to evaluate the feasibility of the preliminary research question. The earlier chapters such as Chapter 2: the Saudi environmental context, Chapter 4: the theoretical framework and Chapter 3: the literature, have provided an overview of research that tries to identify the causes and explain the influence of the causes on change or resistance on management accounting.

My research design in Chapter 4 and Figure 5.4. (research design) demonstrate my own role in the research process and how this too can, and did, change. The figure explains in detail the different stages of research. Therefore I can say that there are two consecutive approaches in the 1<sup>st</sup> empirical work. The first is deductive approach, which shows a departure from the results of previous studies, and the second is inductive approach, a departure from the results of the 1<sup>st</sup> empirical work. Matching results of previous studies with the results of the 1<sup>st</sup> empirical work was needed to guide me to have a more focused second literature review as well as adjusting my research question before conducting the 2<sup>nd</sup> empirical work.

Therefore, in order to get the data needed for answering the preliminary research question, a flexible design was drawn up which is explained in Chapter 4: methodology and method. The basic notion of the design is to explore the literature and extant evidence before conducting a major new collection of evidence. The causes of change

or resistance could differ from one country to another, for example religion could be one of the causes which may play an important part on change or resistance to an ERP systems, perhaps particularly in a country such as Saudi Arabia.

Therefore my thesis does not follow a purely deductive or inductive approach, but it tries to move forward and backward between the literature and the evidence to refine my research question before the major data collection; Figure 5.4. (research design) illustrates this process. The flexible design is time-consuming but it helps to make the second literature and the final 2<sup>nd</sup> empirical work more focused and therefore enables a more robust contribution to be made in the chosen area of research. It allows redirection of the investigation according to new evidence, which comes from interviews, observation and documents which is explained in much depth in Chapter 5: methodology and method.

The main implication of the first part of my thesis is that there are no particular factors which influence change or resistance therefore 1<sup>st</sup> empirical work and 2<sup>nd</sup> empirical work can help to explore and explain those factors and how change and resistance happens in the two case studies participating in my study in Saudi Arabia.

## **Chapter 6: Description of the case companies**

### **6.1.Introduction**

This chapter describes the two companies where I conducted the case studies. The chapter includes historical background of the two companies including for example, company formation, capital, number of employees, organisational structure and company's objectives. Then it provides data collection information of the two participating companies.

### **6.2. Company 1**

Company 1 is a medium-sized private company in the construction business.<sup>9</sup> The company was founded 25 years ago and it is owned by three people. Company 1 is divided into seven subsidiaries, all of which are located in Saudi Arabia. Its primary services include production of concrete and bricks, trade, construction and investment. The company constructs buildings for the government and large companies. Therefore, most of the subsidiaries of Company 1 provides building materials such as concrete and building brick.

Across the seven subsidiaries, Company 1 employs over 1,000 people. However, it was not possible to know the exact number of employees in the group as a whole, because this information was seen by the owners as sensitive since it was viewed as

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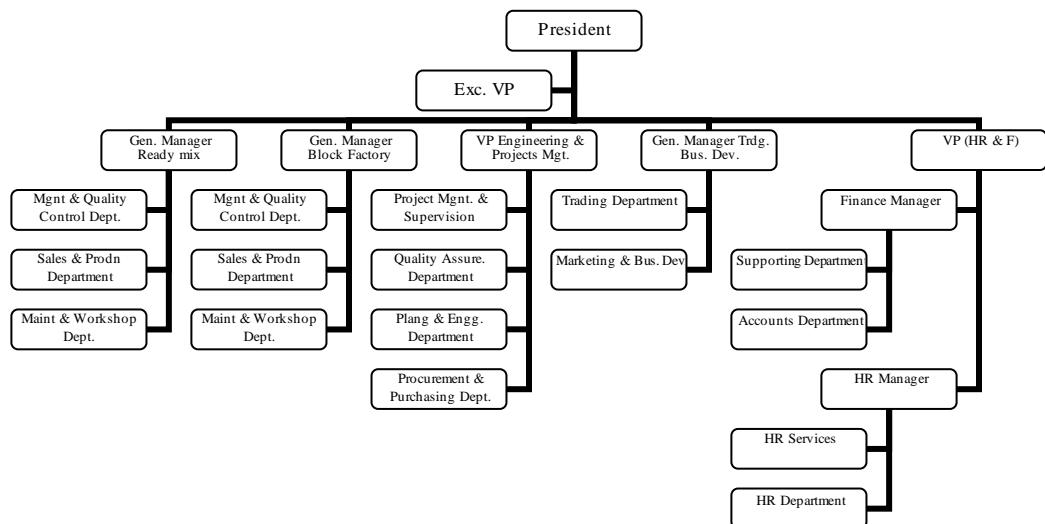
<sup>9</sup> Al-Turkia (2011) indicated that in many studies, the size definition of a company is based on number of employees, for example a small size company is less than 100, a medium sized company is less than 1000 and a large size company is more than 1000.

affecting the status of the company's competitiveness, because there is no publicly available information of this sort about the company.

Similarly there is no precise information on the nationalities of the staff and managers in the company, although it is known that the vast majority of managers and staff were not Saudi nationals.

Figure 6.1 shows the formal functional structure of Company 1.

**Figure 6.1 The functional structure of the private company**



Source: This formal chart was provided by the company

When observing my participants and other Company 1 employees doing their work, I noticed that the working conditions of accountants were not comfortable in Company 1. Company 1 uses an open-office design to increase teamwork, communication, and productivity. However, the open-office design increased the noise in the workplace and I noticed that this was not conducive to effective working.

Many employees, including the heads of five of the seven subsidiaries accounting departments work in one small office and there are no rooms available for private or specific meetings. Next to the accountants is the receptionist which is located in front of the main door of the company. The office is noisy because of the shared computers/phones ringing constantly. The common room where employees eat contains old furniture with old wall paint and so, again, does not present a comfortable environment for employees.<sup>10</sup>

Public and private firms throughout Saudi Arabia have to provide a prayer space for Muslim employees as it is a regulation of the ministry of commerce in Saudi Arabia. However, Company 1 has just a small room for praying and, given the number of employees, this room was not appropriate for its purpose. Furthermore, in addition to the prayer room being built into the building in a triangle shape, because of the limited available space, it was simply not suitable for prayer, because it is dark, smelt bad and the carpet is not very clean.

In Company 1 (private) the ERP system used is ACCPAC, a commercial accounting software package.<sup>11</sup> All accountants in the company were given training in how to use the system, and all accountants were required to use the system. The

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<sup>10</sup> Work environment in small and medium enterprises uncomfortable, from my experience for two months in 1994. Employees working in portable office buildings, although the company's capital is £10 million and its annual profits are £6 million

<sup>11</sup> It costs £42,000. 1 GBP = 5.90322 Saudi riyals; = 5.90322 is the average of the period from 05/08/2010 to 01/02/2011 (X-RATES. 2011).

Available: <http://www.x-rates.com/d/SAR/GBP/data120.html> [Accessed 2.1.2011].



software was applied in 2009 across the accounting of each of the subsidiary companies.

The purpose of implementing the ERP system was to adjust the financial accounts; to be able to make decisions more effectively; and to integrate information between accounting departments in all subsidiaries.

The senior management chose the team who were responsible for the implementation of the new ERP system; and this team comprised a number of accountants from the company along with technicians from the provider of the ERP system. The role of the implementation team was to test the system to make sure it covered all financial transactions of the company. However, after the technical implementation of ERP was complete, the company did not employ any technical expertise in support of the accountants using the system. This shortcoming meant that there was no-one to refer to if the employees faced difficulty with the ERP system.

### **6.3. Company 2**

Company 2 is a utilities company. The company was established in 2000 as a listed company with a paid-up capital of £5,718,681,101, and was established as result of the merging of all Saudi electricity companies in 2000 (Website of Company 2). The main branch is based in Riyadh, the capital of Saudi Arabia, and the company, in total, employs about 30,000 employees. The main activities of the company are: electricity generation, transmission, distribution and supply. Generated electricity flows into the National Grid SA and through to the regional distribution networks from where it is distributed via the network of towers and cables that bring electricity to homes and businesses.

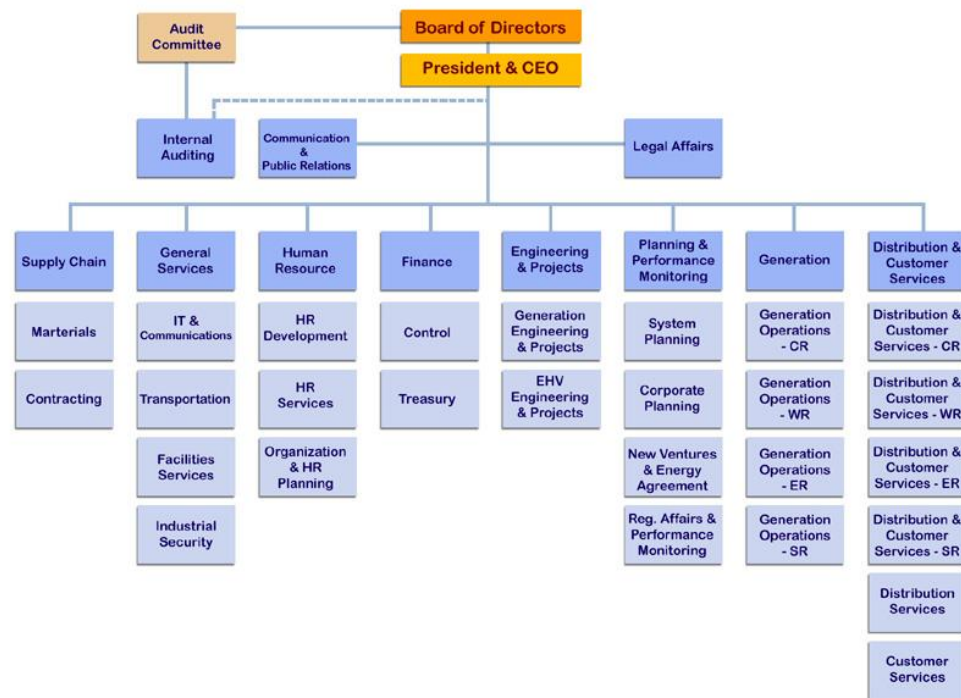
In 2010 the company connected about 95% of electricity supply networks to a single national grid (Construction Week Online, 2010). In January 2012, National Grid SA was established transmitting the electricity from one region to another within Saudi Arabia and the Gulf (EWGCC).

Company 2's organisational structure has been changed several times since its inception in 2000. The Board of Directors approved the new phase-based organisational structure in 2002 which was mainly designed on the basis of specialized activities including the organisational units (Electricity activities), related activities and supporting services to reinforce the company's overall performance on the level of all the company's activities. The company structure was changed because, under its new configuration, it was to be divided into seven subsidiaries in 2012<sup>12</sup> according to the main activities of the company (Website of Company 2). Similar to Company 1 where each subsidiary concentrates on one function, such as providing concrete or building bricks, Company 2 has a similar subsidiary-specialization structure. In the past, each town received the benefits of all of the main activities of Company 2 as itemized above. However, after the new structure each subsidiary focused on one activity such as generating electricity or provide electric power for lighting in homes, businesses and public spaces. Company 2 amended its structure to improve performance and reduce costs as follows:

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<sup>12</sup> On 1st January.2012, the National Grid SA was established.

**Figure 6.2 The Organisational Structure**



Source: Company website (Website of company 2).

When observing my participants and other Company 2 employees doing their work, I noticed that the working conditions of accountants were much more comfortable than Company 1. Each management employee has an office, whereas the heads of accounting departments of the subsidiaries of Company 1 worked in one small office. Employees in Company 2 work on open-office design, however there is no noise, such as I noted to be the case in Company 1. The place is clean and smells nice. It is my view that Company 2 provides better working conditions than Company 1.

Moreover, Company 2 provides a huge mosque which is available for both employees' and public use. However, it must be noted that, because Company 2 is a listed company, the government is entitled to intervene in its operations, therefore the appearance is important, for example comfortable offices, employing more employees than needed and fancy buildings.

The above described the background information of Company 2. The following will describe information related to the ERP.

In Company 2 (public) the name of the software is SAP<sup>13</sup>. There was a reservation by the Director of the ERP system regarding the cost of the software. However, C2MAcc18 and C2MCM2 (Table 6.1 below shows the codes for each interviewee) indicated that the ERP system cost 100 million pounds. Because of the high cost of the project the company decided to do a few adjustments to the ERP system (C2MCM2). Company 2 cannot operate custom-built ERP because the costs would increase. According to C2MCM2, the company made minimum modifications to the ERP system. The high cost of any ERP system presents one of the obstacles faced by the company due to different work procedures used from one branch to another but the requirement that the system is used in the same way in each company. As mentioned above, the subsidiaries of the company were run as separate companies until 2000, but the company decided to generalise the procedure of one branch to other subsidiaries.

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<sup>13</sup> ERP is a concept for managing the business and SAP is an ERP tool 'software' (ERP News, 2012).

**Table 6.1 Codes for each interviewee**

Job type	Codes interviewees in Company 2	Codes interviewees in Company 1
Accountant	C2Acc5, C2MAcc6, C2Acc7, C2Acc8, C2Acc10, C2Acc11, C2Acc12, C2Acc13, C2Acc14, C2Acc15, C2Acc16, C2Acc17, C2MAcc18, C2Acc19, C2Acc20, C2Acc21, C2Acc22, C2Acc23, C2Acc24	C1MAcc1, C1MAcc2, C1Acc3
Management	C2MMan2, C2Man3, C2Man4, C2MMan5, C2MMan6, C2MMan7	C1Man1
Engineering	Eng1, Eng2, Eng3, Eng4	
Computer	C2MCom1, C2Com2	
Marketing	C2Mar1	
Financial manager		C1FM1
Manager of Change Management	C2MCM2	
Director of Enterprise Resource Planning	C2DERP2	
Total	34	5

Source: developed by the author

The first part of the code refers to the name of the company, where C1= Company 1 and C2= Company 2. The second part of the code refers to the job of the interviewees, where Acc= Accountant and MAcc= Accountants' Manager. The third part of the code is a number which refers to the name of interviewees (see explanation of Terms and Abbreviations p. ix).

C2MCM2 indicated that the number of employees was 29,000 employees, but the number who have authority to access ERP was only 6,000 employees. Authorisation in this context means the ability that is given to an employee to access data and perform a particular task (C2Acc7).

The nature of the software implementation in Company 2 is affected by the size of the company; therefore implementation began in 2002 and ended in 2010. Use of the software is available for staff other than accountants. According to C2MCM2, one of the objectives of the software was to manage the resources of the company more effectively as well as supporting other projects in the company - such as a project with

the Gulf Cooperation Council that began in 2002 and ended in 2012, the Logistics Project in 2006, the Balanced Scorecard (which is not in place yet), and merger of all Saudi electricity companies, which took place ten years ago.

According to the C2MCM2 Company 2 created two teams in 2002 to make the ERP implementation successful; an ERP team, and a change management team, of which he was head. It was deemed necessary to have these two teams because of the large size of the company. C2MCM2 began to operate in 2002, and carried out several functions, for example, training a small group of staff to become experts in using ERP.

C2MCM2 indicated that the choice of the appropriate software was a result of a discussion for a period of six months between a 3-person team. One member of the team was an employee from the company who was an expert in his job, for example, the accounting process. The second member of the team was an expert in ERP systems. The third member of the team was an employee who was an expert in the job of the first member but was already a user of ERP. The first member of the team was an employee of Company 2, whereas the second and third members were provided by the ERP Company.

Company 2 implemented the ERP system in three departments: Finance, Human Resources and Logistics. The first department to implement the software was Finance in 2005. The company has run many training courses, but the largest one for most employees was between 2005 and 2006.

Since the company has a very large number of employees (30,000), it chose a sample of staff to be involved in the process of selecting the appropriate software and trained them intensively as “experts” so that they could refer to them in the future. The rest of the staff were trained in groups by the company.

Staff training began in 2002 and ended in January 2010. Training periods were different; some staff were trained to become experts known as ‘subject matter experts’. According to C2DERP1, the manager of the ERP department, the “in-house experts” received training for a period of two years from the beginning of 2008 until the beginning of 2010 but, in his view and in spite of that, the experts were not actually ready because they did not receive enough training. He also added that training experts created some problems for the company as staff trained as “experts” then found better jobs in other organisations, which meant the selection and training of more employees to become in-house experts needed to be conducted.

The above described the background information of Company 1 and Company 2. The following will describe collecting the data from the two case studies.

#### **6.4. Collecting data**

I used interviews as the main source of evidence in both companies. I conducted 39 interviews in total. Table 6.2 below shows the demographic characteristics of the interviewee groups. The classification of interviewees helps in providing an overview of the types of people involved, for example age, education level, etc.

I chose these two companies as they are near to my home, so this minimised the cost. Most of the interviews were face-to-face, but I also conducted both focus groups and telephone interviews when the face-to-face approach was not possible. All interviews questions were conducted in Arabic and transcribed by me for inclusion in my thesis. They are provided in Appendix 8.1 and 8.2, along with the English translation.

**Table 6.2 Demographic Characteristics of the Interviewees Groups**

Variable		Company 1	Company 2	Total
Age (years)	Less than 30 years old	2	14	16
	31-40 years old	0	13	13
	41-50 years old	2	3	5
	51-60 years old	1	4	5
Education level	University	4	25	29
	Diploma	0	8	8
	High school	1	1	2
Position	Manager	3	11	14
	Employee	2	23	25
Job type	Accountant	3	19	22
	Management	1	6	7
	Engineering	0	3	3
	Computer	0	3	3
	Marketing	0	1	1
	Financial manager	1	0	1
	Manager of Change Management	0	1	1
	Director of ERP	0	1	1
Experience	Less than 1 year	1	3	4
	1-2 years	0	3	3
	3-5 years	0	8	8
	5-14 years	3	10	13
	More than 14 years	1	9	10
Number of interviewees in each Branch	Branch 1	5	18	23
	Branch 2	0	8	8
	Branch 3	0	8	8
ERP training	Yes	0	7	7
	No	5	27	32
Using ERP	ERP	5	28	33
	Not ERP	0	6	6
Nationality	Saudi	1	34	35
	Egyptian	4	0	4
Number of interviews	One time	3	29	32
	Two times	2	5	7
Total		5	34	39

Source: developed by the author

In order to arrange the interviews it was necessary to begin a dialogue with the companies some weeks before travelling from Dundee to Saudi Arabia. “Cold” emails and phone calls to the companies were insufficient, and again the need for personal contact was essential in determining the correct person to contact. On arriving in Saudi Arabia, I visited the companies personally to arrange the interviews. Even given that I



knew some of the individuals personally, it still proved difficult to make contact with them through their company.

One of the methods I used to find interviewees was the snowball technique.<sup>14</sup> It is a method to identify further interviewees by existing interviews. Therefore the sample group appears to grow like a rolling snowball. The technique is often used when it is difficult for researchers to identify or access the population (Saunders et al., 2009). However, the snowball technique has some limitations, for example interviewees already secured are most likely to identify other potential interviewees who are similar to themselves, resulting in a homogeneous sample which might bias the findings (Saunders et al., 2009). The skill of the interviewer is paramount in developing and using probing techniques as a means of countering, as far as they can, that possibility.

## **6.5. Conclusion**

Chapter 6 has described Company 1 (private) and Company 2 (public), including information such as the political influences, the merger of the companies, change in the organisational structure over time and information related to the ERP.

This chapter showed that Company 1 is less influenced by the Saudi government and that most of the employees are foreigners. Whereas Company 2 is more influenced by government and most of the employees are Saudis. The political policies such as Saudization and the Sponsorship system influence both Saudis and foreigners, but in

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<sup>14</sup> Appendix 6.1 shows a mind map of my Snowball technique for both 1<sup>st</sup> and 2<sup>nd</sup> empirical work.

different ways, as described in Chapter 2. Therefore understanding the backgrounds of Company 1 and Company 2 is important to understand the reasons for acceptance of, or resistance to, an ERP system.

The following chapter will discuss the 1<sup>st</sup> empirical work, which was conducted in 2010.

## **Chapter 7: 1<sup>st</sup> Empirical work**

This chapter presents my 1<sup>st</sup> empirical work. This chapter is structured as follows: it starts with a restatement of the preliminary question directed by previous chapters and then shows the objective of the 1<sup>st</sup> empirical work. Then it presents the factors from politics, economics, social culture and religion, technical factors and organisational factors. Then it summarises the factors that influence the acceptance of, or resistance to, an ERP system.

### **7.1. The objective of the 1<sup>st</sup> empirical work**

The 1<sup>st</sup> empirical work explored the behaviour of employees and identified the factors that drive that behaviour. The literature review in Chapter 3 developed two research questions (i) why the change (introduction of ERP) happened, with particular reference to the socio-economic and socio-cultural contexts, and (ii) which factors might threaten to compromise change and lead to resistance to such change in management accounting.

The 1<sup>st</sup> empirical work is small in scale and does not intend to provide significant results. I conducted the 1<sup>st</sup> empirical work one year previous to the 2<sup>nd</sup> empirical work. The objective of the 1<sup>st</sup> empirical work is to identify the external and internal aspects of acceptance of, or resistance to, an ERP in Saudi Arabia. By using a case study as I did in my research, it is possible to survey the employees in order to better understand why they believe acceptance or resistance takes place and to explore the relationship between many factors.

Although this study is concerned with change in Saudi Arabia, it is important to understand the reasons that influence foreigners' attitudes towards change, because they

represent 90% of employees in the private sector (Ministry of Labour, 2010; see also Chapter 2).

To address my 1<sup>st</sup> empirical work question I collected data using interviews and observations. I used both semi-structured and unstructured interviews to explore the factors that influence acceptance of, or resistance to, an ERP and to explain how those factors are related. I collected my data during July-August 2010. Two foreign employees were interviewed in Company 1 and seven Saudi employees in Company 2 (see Chapter 6 for a description of the two companies). In Company 1 (C1FM1)<sup>15</sup> and an accountant (C1MAcc1) were interviewed twice. The number is small because some of the employees were on annual leave and this meant that the other employees were too busy for me to conduct interviews with them. In Company 2 the Director of Enterprise Resource Planning (C2DERP1), the Manager of Change Management (C2MCM2), one manager (C2MAcc6) and two accountants (C2Acc5 and C2Acc7) were interviewed, and two short interviews with other staff (C2Acc8 and C2Acc10) were also conducted<sup>16</sup>. Each interview lasted between 30 minutes and an hour.

I took notes during the interviews and observations. Then I translated these notes into interview questions beside the actual sub-questions of the 1<sup>st</sup> empirical work. This resulted in the following list of questions:

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<sup>15</sup> See Table 6.1 Codes for each interviewee p. 165

<sup>16</sup> From now on, when drawing on my interviewees with participants, I will refer to the participants by the above acronyms, or codes, as appropriate. Hence in reference to information material emerging from an interview with Company 1's Financial Manager, I will have, for example, 'C1FM1 indicated/told me/etc.'

1- When did the ERP implementation take place? In what department did it take place?

2- Was the implementation successful? How do you know?

3- Did employees get used to the new system? Which employees are confident in using it and which are not?

5- What problems in the job has the new system created?

7- Did you evaluate the use and success of ERP in your organisation?

## **7.2.Political influences**

### **7.2.1. Political influences on change**

The following section explains the impact of political factors on employees' attitudes to change. In Saudi Arabia, political regulations have a significant impact on the behaviour of foreign employees' attitudes to change, such as the introduction of the ERP system. Among these regulations is the Sponsorship system. Sponsorship system, an arrangement whereby companies would sponsor the work visas of foreign employees. It has allowed companies to prevent employees from moving between jobs in Saudi Arabia (see section 2.4.2. Sponsorship system in Chapter 2).

C1FM1 indicated that the majority of staff in Company 1 were foreigners and they could not resist the ERP system since foreigners did not have the flexibility to move to another company compared to Saudi employees. Therefore such employees do not resist the decisions by the owner of the company to use the ERP system. However, C1MAcc1 indicated that he felt that he lost the value of his previous experience,

because he felt that he started from scratch in doing his work. C1MAcc1 did not resist, but he was unhappy that he had to use the ERP system.

Some of the foreign employees reported feeling depressed because of what they consider to be their ill-treatment and insults towards them because they are foreign. However, such employees have not raised this because they wanted to avoid an argument with the owner of the company. For example, C1FM1 who is a foreigner said that one of the owners of the company insulted him, but did not react.

C1FM1 said that foreign employees bear the negative aspects of work and the humiliation that they feel, because they were taking a salary three times that of the one they would receive in their home country<sup>17</sup>.

The above showed that political interventions, such as the Sponsorship system leave foreign employees with no option to resist the ERP system.

In Company 2 it was apparent that there was a significant political influence in the decision of the company to implement ERP as explained in Chapter 6. These influences are the merger of the companies to become one listed company, and the change in the structure by re-dividing it into smaller companies in 2012 and then using the ERP system to enhance performance. From the owners' perspectives, ERP was necessary to capitalize on the benefits of managing such a large company which operated as a number of decentralized units 'tied together' through ERP.

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<sup>17</sup> There is a later discussion where I will give more evidence for this salary issue.

However, Saudis employees mention the influence of politics on employees to accept the ERP system which is discussed with the influence of economics in section 7.3.

### **7.2.2. The influence of Saudi's political framework on attitudes of resistance**

It appears that political factors have had a positive impact on the acceptance, by foreigners, of an ERP system. However, it had a negative impact on the behaviour of foreign employees, for example foreigners, as a means of holding on to their jobs, do not cooperate with others, work individually, do not require any training and do not criticise the ERP system.

One of the methods that the government introduced to place Saudi nationals in work, rather than paying them *not* to work was Saudization as explained in Chapter 2. Saudization could be one of the reasons for the individualistic behaviour of foreigners. If they do not cooperate with others or share any knowledge about their job then senior management cannot replace them with Saudis. C1FM1 indicated that employees work individually and don't share their knowledge with other.

For economic reasons, Saudization affects negatively the success of the implementation of ERP systems, because (according to C1FM1) Saudi employees tend not to stay in Company 1 because the salary is less than other government-owned companies. However, the company has to keep employing Saudis to comply with the government regulations, and according to C1FM1 time, and money, is lost in the continual re-training of staff.

Another influence on the behaviour of employees is that foreigners do not ask for training. In Company 1, C1FM1 indicated that some employees need courses in

reading English language but they claimed that they do not need these. It is my view that one reason for this is that they would see it as exposing a weakness that could lead to their being replaced by a Saudi worker under the Saudization policy. C1MAcc1, a foreign employee with 16 years experience as a management accountant, indicated that he faced difficulty using the ERP system in English, but that he did not ask for courses in English. Thus it is clear that the C1MAcc1 did not want to show that he faced difficulties in using the ERP system. As C1MAcc1 is not a Saudi, what this might suggest that political influence has a role as foreigners do not resist orders from senior management. Also he does not want to show any weakness that my result in him being replaced.

My Company 1 participants did not indicate many advantages or disadvantages of the ERP system when I tried to discuss this with them. Not one of the interviewees, indicated that older employees reject change.<sup>18</sup> I noticed that neither of the two interviewees discussed unwillingness to learn, or discussed any financial issues related to their salaries, or complained about their working conditions. However, the working conditions of accountants were not comfortable in Company 1, on that the heads of accounting departments of the subsidiaries of the company worked in one small office and it was difficult to find a place to sit and interview them (See Chapter 6).

It seems that the Sponsorship system and Saudization made foreign staff accept the ERP system, but there was nevertheless a negative impact on their behaviour, which

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<sup>18</sup> With the exception of an employee with short experience when he said that the more experienced employees are facing problems in the use of the ERP system, but they do not want to talk about those problems.



made the working environment delay the application of the ERP system. In the context of my thesis, this is an important element as staff needed to cooperate with each other to cover tasks during annual leave.

Furthermore, there is a negative impact on employees' behaviour in the non-cooperation with or non-requesting of training courses, even when they recognise they need them, as seen from C1MAcc1 above. However, employees do undertake what I would argue to be personal learning or development. For example, everyone had a personal notebook in which the employee took and kept notes of how to do things in their job. Therefore employees actually learn independently and, it might be said, secretively, as a means of ensuring as far as possible, that they kept their job by providing no excuse for their replacement by a Saudi employee under the terms of the Saudization policy.

The above discussion focused on the influence of political factors such as the Sponsorship system and Saudization. These factors are not directly related to the acceptance of, or resistance to, an ERP system, but they influence the behaviour of the foreign employees. Interestingly, they have a positive effect such as the acceptance of the ERP system and individual learning, but had a negative impact because of the lack of cooperation between staff to overcome the difficulties of the ERP system.

## **7.3.Economic influences**

### **7.3.1. Economic influencing change**

Economic factors can influence the attitudes of both Saudis and foreigners to change. C1FM1 indicated that economic factors are one of the main drivers of employees attitudes towards change (See section above of the political influences). A

foreign employee has three times the salary than he would normally expect in his own country, for example, Egypt. The average salary for accountants in Egypt is £227 while in Saudi Arabia is £1203 (see Chapter 2 section 2.5.4. Salaries of employees in private sector in Saudi Arabia).<sup>19</sup> Therefore, the foreigner does not resist the ERP system. In fact, foreigners stay because the pay is better, from that perspective it could be said that the ERP system is irrelevant and they will work around any obstacle for higher pay. As such, foreign accountants are less opposed to doing other work which does not match his job description than the Saudi accountant would be.

Although, foreigners receive high salaries, they are paid lower rates of pay than Saudis would expect to be paid (See Chapter 2, Table 2.5). Saudi Arabia has one of lowest rates of pay among the Gulf countries, and 80% of staff salaries are £847 or less/per month (Alzamil, 2011). The cost of living rose steadily in the past years, 27% in 2011 compared to 2007 (Juma, 2012). Moreover, Housing cost have increased by 70.9% during the period from January 2007 until September 2011 (Khaznadar, 2011).

Thus it can be seen that economic factors have an impact on all of the staff, nationals or foreigners. However, importantly, the reasons for this importance are arguably the opposite of each other. Where a Saudi might to co-operate with the introduction of change such as ERP, it is because they would use their increased skill

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<sup>19</sup> 1 GBP = 11.8957 Egyptian Pound; = 11.8957 is the EGP (Egyptian Pound £) Exchange rates as of Friday, 16th May 2014 (XRates. 2014. Available: <http://www.xrates.net/foreign-exchange/egp/egyptian-pound/converter-and-tables/> Accessed 16.5.2014)

and knowledge *to leave* and move to another company. For the foreigner, it is so they *can retain their job* and not lose it to a Saudi national under the terms of the Saudization policy. For example C2MAcc6 reported that the one of the reasons for Saudi employees to learn an ERP system is to move to other companies in order to get higher salaries.

It is worth mentioning again the great economic development that has occurred in previous years in Saudi Arabia (See Chapter 2), and that caused changes in the employment markets, since new companies need experienced employees. Economically these new companies can give trained employees many advantages because they do not need to pay for training for employees, but instead they hire ready trained people as Company 2 discovered to their cost.

### **7.3.2. The influence of economic on resistance to an ERP systems**

The above explained the impact of economic factors on employees' attitudes to change. The following will explain the impact of economic factors in regard to successful implementation of an ERP system. In Company 2 many of the Saudi employees resigned after they received training as they could get a better job elsewhere (C2MAcc6). However, while the number of people who moved to other companies is high, Company 2 did not train all employees. C2DERP2 indicated that they had to train the people left behind in order to replace the knowledge of those employees they had lost; one implication of that being the chance that the cycle of loss would continue. Therefore, the cost of ERP implementation could be much higher than anticipated.

Economic factors are important to explain why employees resign. C2MAcc6 indicated that the reason is due to the employees who asked for upgrading and higher salaries, but Company 2 refused to increase the salaries for employees. The manager of

the ERP implementation team and C2MAcc6 indicated that many staff resigned in order to get better jobs outside the company because Company 2 was paying less than others. Employees in Company 2 asked for bonus payments after they trained for the ERP system but this was problematic as C2Acc7 noted below:

“Management cannot encourage employees financially; perhaps because of the large number of employees, thus, this could lead to many resignations of staff”

Unfortunately, many of the long-standing employees resigned from Company 2 to go to other companies to get better jobs and better salaries (C2MAcc6). It should be noted that C2MAcc6 saw the resignation of employees of the company as pivotal, because in his opinion the company lost many of the best long-standing employees.

However, C2Acc7 indicated that not all staff need financial encouragement; some needed moral support. As he said:

“There are written encouragement formally and informally from the manager to employees, but they do not determine the bonus of employees”

My interpretation of these circumstances would be that the problem was not caused by the training experts but by Company 2 itself because it would appear they created the conditions in which these employees, once trained, would go elsewhere for work, presumably because they could get higher wages elsewhere as a result of their additional training in ERP. I’m assuming that Company 2 did not pay their employees more as a result of their gaining more expertise in using the ERP system, and yet they expected them to take on the additional role of providing information and expertise to other employees as they started to learn to use the ERP. If that was the case, it’s not surprising the newly ERP-trained employees would seek higher salaries elsewhere.

This section showed that economics influences both Saudis and foreign employees to change. However, there is negative result of economic development for Company 2, in that new companies attracted many Saudi employees to get higher salaries. Therefore, Company 2 had to spend more time and money to train new employees.

## **7.4.Social culture and Religion**

### **7.4.1. Social culture and Religion influences change**

The following section explains the impact of social culture and religious influences on employees to change in Company 2 (the public sector company employees almost exclusively Saudis). Religion is one of the external causes which affect employees' behaviours. The Imam of the company's Mosque has a role to play in the behaviour of people at work. The Mosque is responsible, on a permanent basis, for encouraging staff towards appropriate behaviours from a religious point of view.

I attended a talk after praying in the mosque which was about honesty in spending time at work, and ensuring that the salary matches the effort put in at work<sup>20</sup>. An interesting aspect of this visit to the Mosque was that it showed that many of the foreign employees are also Muslim and go to the company's Mosque.

My visit to the mosque was useful because I was able to open a dialogue with C2Acc7, about the role of the mosque in the process and impact of change. C2Acc7

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<sup>20</sup> In the West, this would be referred to as a fair day's work for a fair day's pay

indicated that “Understanding religion is a hindrance”. It is similar to Alomar (1999) who indicated that the problem is caused in the Islamic world by people not following Islamic principles appropriately. Separation of the Islamic principles in the context of business may be one of the most important reasons for the emergence of many of the negative aspects. My interpretation of C2Acc7’s comment is that religion in itself is not an obstacle, but that it is not enough to say you are Muslim, but your actions must be Islamic. From this we might see that, whether people wanted to accept the change or not, it was their duty to help and work with others in dealing with whatever the change might bring about.

Indeed, there is a need to know more about the influence of social culture and religion on the behaviour of both Saudis and foreign employees. Nevertheless, in the following section I will outline some preliminary findings in that regard.

#### **7.4.2. The influence of social culture and religion on resistance to an ERP systems**

Nepotism is a socio-cultural factor that affected the ability of C1Acc1 to perform his work in Company 1. He noted that there were a number of accountants in the company who lacked training but were employed through the power of managers. For example C1FM1 indicated that one of the senior managers had employed his relative. That is, people are appointed to jobs because of *who* they know rather than because they are qualified and able to do a job.

C1FM1 highlighted this common cultural factor, to Saudi and some other countries, and explained that nepotism is one among a number of difficulties faced in Saudi Arabia by non-Saudis:

“[There is] difficulty in dealing with different nationalities, difficulty of dealing with someone who works in a place where the temperature is high, difficulty of dealing with people who are not specialists who have been hired because of nepotism or because of Saudization.”

My view is that accounting is affected in two ways. First, a trained accountant needs to spend a considerable amount of time in training a new un-qualified, inexperienced employee which results in a decrease in the productivity of the accountant. Second, the company does not actually benefit from the new employees because they tend to leave the company after a short period of time as they are either a student and have finished their studies or they find a higher paid job elsewhere. Therefore, C1FM1 suggested that the company wastes resources on training students who leave the company. As a result he thought accountants waste a lot of time in training others while they at the same time have to use the new ERP system for which they might not be adequately trained. Nepotism of this nature is considered a barrier to the success of ERP systems because it takes a lot of time from accountants.

Religion was another factor that affected the work ethos. C1MAcc1 highlighted that senior management's view of religion was negative, explaining that senior management saw Muslims as less productive than non-Muslims due to the time lost in prayer, as shown below:

“Management looks at religion as something negative, for example, a Muslim prays and fasts and this time is lost, the availability of training is not always possible and as you can see this office is very small.” (C1MAcc1).

As the senior management, and C1FM1 are also Muslims it is surprising that C1Acc1 feels this way. What, arguably, is being seen here is a ‘culture clash’ between that built up within the context of Islam and that expected by the economic developments that Saudi Arabia is undergoing. The managers/owners appear to be embracing such developments, but because they are capitalistic in nature, they do not sit

well with Islamic teaching. As a result I found a negative influence of social culture on the implementation of the ERP system in Company 1.

## **7.5. Technical factors**

### **7.5.1. Technical factors influencing change**

The following section explains the impact of ERP systems on employees' attitudes to change in Company 2.

In Company 2 (the public sector company), the interviewees identified only a few advantages of the ERP system. One advantage noted was that in the past, there was ambiguity in the reasons for making a particular decision, but since the implementation of ERP the employee is part of the decision-making group within the department. As C2Acc5 explains:

“Now work changed, we work as a team, of course depending on the nature of the manager, where there is more than an opinion, the old system was a dictator, take this and do this, but now manager lesson to more of one opinion, and if he astonishing he asks for other options, and chooses the best solutions”

Two of the interviewees, C2Acc5 and C2Acc7 felt that after the application of ERP, staff, as well as managers, are happy with their work. As a result of the change, the accountant works with his manager as a team and not just as boss and employee. In particular they believed that this was due to the increase in the transparency in the information, for example, employees now know the reasons for decisions.

Another advantage of the ERP system relates to improvements to the job tasks, As C2Acc5 notes:

“The existence of reports in ERP facilitated the work, we can follow all the projects in Saudi Arabia on a daily basis, easily send and receive information,



to deal with information more flexible because it is updated information, we can use our power effectively in the follow-up projects.” (C2Acc5)

In this regard, accountants in Company 2 appear to be recognising elements of ERP acceptance that were identified elsewhere. For example, some studies (such as Scapens and Jazayeri's of 2003), indicated that the characteristics of ERP such as its integration, standardisation, routinisation and centralisation can facilitate changes advantageous to users, while others (including Al-Mudimigh, Zairi and Al-Mashari, 2001 and Al-Turkia, 2011), have noted that the reasons for accepting ERP systems are normally due to the advantages of using the system.

The above show that ERP can reduce ambiguity, however, ERP may increase ambiguity, such as incorrect information. It appears that the ambiguity of ERP systems can influence both acceptance of, or resistance to, an ERP system. This finding is similar to that of Sharma et. al. (2010) who indicated that ambiguity in the ERP system opens the opportunity for staff to help each other to overcome any such ambiguity. My findings show that the ambiguity helps change for Saudis in Company 2. This is because they help each other. However, foreigners in Company 1 still work individually. Thus, the explanation of Sharma, Lawrence and Lowe (2010) does not apply to Company 1 because employees do not help each other.

Nonetheless, it appears that the ambiguity of ERP systems help foreigners to accept change, but for different reasons. As has been seen above (section 7.2. Political influences and 7.3. Economic influences), foreigners tend to not share knowledge about their job with others; therefore, the ambiguity of an ERP system makes it difficult for employees to perform other employees' jobs during vacation times or when someone is unwell and away from work.

Interestingly, I even found that C2Acc7 continued to use the ERP system, although his manager told him to use another method to get the information. This would imply that C2Acc7 preferred to be able to blame the system for any errors in the information he produced:

“Employees avoid responsibility because they are risk averse, thus they are not punished in case of errors in data”

He further explained that in case of mistakes in the information the ERP system takes responsibility:

“Some of things that make the change happens is that the manager always asks whether the information comes from the ERP system, also the ERP system is safety of the employee in terms of mistakes”

Interestingly, and perhaps somewhat paradoxically, my 1<sup>st</sup> empirical work suggested that mistakes made by an ERP system did not lead to resistance but made employees accept the ERP system. I found that resistance of an ERP system was not linked to the limitation of the system but to the influences of other factors such as the role played by senior management. Senior management has power to punish employees if they use information other than that provided by the ERP systems. Staff do not like using the ERP system but one thing in its favour is that management are so committed to it that they will ignore inaccuracies.

Therefore employees found it safer for them to use information that is provided by the ERP system, even though they know that the information is not accurate. It appears that the interpretation of employees to the mistakes in ERP systems is important to understand the acceptance of, or resistance to, an ERP (see section 7.5. Technical factors). This important result is that it is not the advantages or disadvantages of the

ERP system that helped to make employees accept it, but how the staff responded to those advantages and disadvantages.

I found the explanation of using an ERP system is different in Company 1. In Company 1 they indicated that the main reason was to follow the orders of the senior management. However, they did not mention the advantages of the system nor imperfections in the system as the main reason to use the system. For example, C1FM1 explained that:

“There is no complexity in the software, ... The software is only a comprehensive accounting software of the other subsidiaries of the company”

C1MAcc1 agreed and said:

“The work has not changed, but the new is the method to access to information”

Perhaps the reason for not talking about the difficulties that they faced was due to the competition between C1FM1 and C1MAcc1. Since, C1FM1 indicated that when he was appointed he felt that the C1MAcc1, who has 16 years of experience, planned to be a C1FM1. Therefore, C1FM1 looked at the job resume of C1MAcc1 and found that he did not have an undergraduate degree in Accounting. Therefore, C1FM1 put pressure on C1MAcc1 to get an undergraduate degree or he would change his job title. After some years C1MAcc1 received an undergraduate degree in Accounting. Then C1FM1 changed the job title to Accountant's Assistant since C1MAcc1 had no experience after he got the undergraduate degree. It is my contention that the competition between C1FM1 and C1MAcc1 explains the lack of communication about the problems that were encountered in the ERP system.

Thus, it appears that the feelings and attitudes of employees can play an important part in their acceptance of, or resistance to, an ERP system. This finding agrees with Ansari and Bell (2009) who indicated that the general feeling of staff in West Africa was that they were undervalued, and this could influence resistance. It appears that foreigners feel safe if they do not share knowledge about their job with other employees (See section 7.3. Economic influences). Moreover, Busco, Riccaboni and Scapens (2006) indicate that employees are continually looking for some level of psychological safety. It could explain why both Saudis and foreigners accept ERP systems even though they do not trust them. Therefore, employees do not simply obey the senior management's order of using an ERP system.

This section explored the influence of an ERP system on change. It appears that the advantages of ERP systems are not the only reason for using an ERP system (See Scapens and Jazayeri, 2003; Al-Mudimigh, Zairi and Al-Mashari, 2001 and Al-Turkia, 2011). Nonetheless, the evidence shows that the disadvantages of an ERP system can also influence the acceptance of the ERP system. It appears that trust or distrust, ambiguity or clarity, advantages or disadvantages of the ERP system, in themselves, do not determine acceptance of, or resistance to, an ERP system. Rather, what determines the acceptance of, or resistance to, an ERP system is how employees react to those factors. More important is what factors influence the employees' reactions, as the 1<sup>st</sup> empirical work showed that socio-cultural, -political, -economic, and -religious factors, along with the culture of the company, all influence the behaviour of employees. This discussion has demonstrated the focus of my thesis on the behaviour of employees to explain how the ambiguity of ERP systems helps foreign employees to keep their jobs, whereas Saudis work as a team to resolve the ambiguities of an ERP system.

### 7.5.2. Technical factors influencing resistance

The above explained a number of elements of the impact of ERP systems on employees and the extent to which they influenced acceptance of change. The following will explain the impact of ERP systems on employees to resist change in Company 2.

With reference to using ERP, I developed a list of barriers to that use (Table 7.1). The identification of those barriers came mainly from C2Acc5 and C2Acc7.

**Table 7.1 Barriers of using ERP system**

The barrier of using ERP	Name of the interviewee
1. Inflexibility with ERP	C2Acc7, C2Acc5
2. Ambiguity in the information of an ERP system. Employee would not able to ask for an explanation of the information due to lack of knowledge of its source	C2Acc7, C2Acc5
3. The information is general and not detailed	C2Acc7
4. Employees do not know what type of reports that ERP has and which are related to their job	C2Acc7, C2Acc5
5. Information is not updated regularly enough for accuracy	C2Acc7, C2Acc5
6. Job description is not written	C2Acc7
7. Training was general and only for one-day	C2Acc7
8. Employees do not know whether or not a particular course is suitable for him	C2Acc7, C2Acc5
9. The implementation of ERP system was sudden	C2Acc7
10. Employees have no authority to request certain information	C2Acc7

Source: Interviewees in Company 2

Before discussing those limitations listed above it is important to shed some light on the interviewees who identified them. It was clear, from their biographical data gathered as part of my research, that one of the participants in particular, C2Acc7, was neither a lazy nor an obstructive employee. On the contrary, he had received many rewards for his performance, having been awarded the employee the month in September 2008, and employee of the year in 2009.

In addition, C2Acc5 and C2Acc7 actually used the system even though it had many limitations. Moreover, C2Acc5 who mentioned many limitations of the ERP system, not only used the ERP system, but also worked hard to overcome some of the limitations of the ERP system.

One of the difficulties facing employees is mistakes in information that is provided by ERP system. C2Acc5 gave an example of, what he referred to as, ‘the illogical percentage’:

“A new construction project has just completed, the percentage of completion is supposed to be 100%, but ERP system provide illogical percentage, for example, the percentage of completion is 60%”

The ERP system is wrong because C2Acc5 knows for certain that the project has been completed and so it should be shown on the system as 100% complete. Other limitations of ERP systems is that it provides aggregate numbers but not detailed information. Interviews with staff and C2MCM2 have shown that two particular flaws with the ERP system are given real importance in affecting their ability as accountants:

“The reports in ERP are inflexible and difficult to deal with, and there are many models we do not know, the figures presented by the ERP are general and not detailed and we cannot contact the sources of information because they are not known” (C2Acc7, 2010)

Another limitation of an ERP system is that ERP provides instant information on the state of something at that time, a ‘snap shot’. However, as C2Acc5 explained, the nature of his work focused on the difference between old and new information in order to assess degree of progress; but that the system did not provide him with appropriate information to make such a comparison. Also, he could not print the information at different times in the process to enable him to make the necessary comparisons. C2Acc5 did not resist the ERP system but he tried to overcome this limitation by

designing different report styles such as the following, which demonstrates a significant difference between the culture of working within the private and the public sector companies that participated in my study.

C2Acc5 tried to export a report from the ERP system to Microsoft Excel software, while he did not succeed the first time, a foreign employee later taught him how to design a report from the ERP system. As C2Acc5 said:

“The limitation of reports is that they cannot be translated to excel, but an employee who is from Philippines provided the solution”.

This example demonstrates that a significant difficulty of using ERP is in producing viable/useful reports directly from the system. There are many different report styles in ERP and there are problems of flexibility in the reports submitted by the ERP itself. Furthermore, there is no customisation of the software because of its high cost, and there is a lack of commitment from some departments to enter data on a daily basis.

Thus, in order to produce useful material from the system, my 1<sup>st</sup> empirical work indicated that it was necessary for employees to help each other, but that this only happened in Company 2 where, as C2Acc5 stated, some of the staff worked together to design special reports from the information provided by ERP. Also, some of the staff exchanged their experiences of using ERP (C2Acc5). C2Acc5 then taught other employees what they had learned as a means of improving the use value of ERP.

The findings of my 1<sup>st</sup> empirical work suggest that helping each other is important for the success of the implementation of an ERP system, certainly in the context of Saudi Arabia where, somewhat paradoxically perhaps because of the socio-political and economic culture, such help was difficult to acquire, particularly in the

context of the private sector. In Company 1, such help was non-existent, whereas in Company 2, as C2Acc5 and C2Acc7 indicated, the social culture was one of the factors that encouraged them to help each other. They said colleagues were one of the main sources of learning, since only one day of training on the ERP system was provided prior to its implementation.

The explanation of C2Acc5 has similarities with the findings of Sharma, Lawrence and Lowe (2010) which suggest that implementation of the new system which is less in line with the company than the old one can force some employees to be creative to solve problems.

Some interviewees only received training over three days. This training was very generic and was not deemed to be sufficient by those interviewed. According to C2Acc5, C2MAcc6, C2Acc7, C2Acc8, C2Acc10, C2DERP2 and C2MCM2 who were interviewed, the training of staff is still ongoing.

C2Acc5 indicated that an employee (or end-user) could ask the expert-user (or super-user) if they required technical support. C2Acc5 indicated that if the expert-user could not provide a response to the question then the question was forwarded first to C2MCM2, then to a consultant, and ultimately to SAP's own support services in Germany. Thus, I would suggest that the technical support of the expert-user should play an important part in the extent to which the acceptance of, or resistance to, an ERP system occurs, and also to explain either eventuality. As not all employees are fully trained in the system, these expert-users are the official source of technical support to end-user. However, the reality is somewhat different.

There are other problems though, one difficulty employees face is choosing relevant training courses. C2Acc7 indicated that whilst there were many courses on



ERP available to employees, it was difficult to receive adequate training as it was hard to identify the relevant course which would be appropriate, since there was no job description of his job. Also, he indicated that C2MCM2, who by virtue of his title alone we might assume would play an important role in managing the change so that it would be affective, was not aware of specialist training for each employee. Moreover, C2Acc5 commented that there was a lack of clarity in the way to apply for the courses:

“In the past it was clear, but now I cannot know the courses available, my manager always refuses my request, so I went to him which is just ten steps from my office to find out what courses are available in order to ask for one”.

C2Acc7 indicated that there were some reasons related to C2MCM2 are as follows:

“Work tasks are not written, as well as the authority to request certain information is not known, the implementation of ERP was sudden and there is no financial encouragement.” (C2Acc7)

All these barriers made C2Acc7 feel devastated as he was used to feeling competent in his work.

The above explored the technical factors that influence employees to accept or resist ERP systems, with some reference to the literature. From this 1<sup>st</sup> empirical work, with particular reference to Company 2, it appears that a distrust and lack of confidence in an ERP system does not necessarily make staff resist the ERP system (See section 7.5.1. Technical factors influencing change).

The findings from Saudis and foreigners talked with and observed for my study showed that distrust of ERP systems is one of the reasons for using it since, even if they know that it does not work, they are simply following the orders of their managers and

so could not be blamed for incorrect information. Therefore, distrusting the ERP system can influence acceptance of change rather than resistance to it.

Moreover there is another finding that conflicts with Busco, Riccaboni and Scapens (2006) who indicate system trust can increase as a result of following rules from the decision maker. However, employees in both companies follow senior management orders for using the ERP system but still they do not trust the ERP system.

Of course there is a caveat, but this is in itself a finding: it is vital that research conducted in an area such as this one must be considered in all of its socio-cultural, -political, -economic and -religious contexts. Not to do so could lead to a failure in identifying key factors and skew the findings.

The above explored the technical factors that influence employees to accept or resist ERP systems. The following discusses the organisational factors.

## **7.6.Organisational factors**

### **7.6.1. Organisational factors influencing change**

This section explores the internal issues inside the two organisations which influences the acceptance of, or resistance to, an ERP system. Brainin (2008, p. 170) indicated that organisational culture can be seen as a reflection of societal culture, or other culture-producers inside organisations.

“The surrounding societal culture is an external source of influence on organizational culture through the behavior of organizational members who introduce their beliefs, norms, and values into the organization.”

The alternative culture-producers are linked to individual organisations who have their own unique culture.

“Organizational culture can be examined as an independent entity that develops its own unique dimensions because of differences between tasks, expertise/occupations, and activities” (Brainin, 2008, p. 170).

Brainin suggested that these different views complement each other. Both views of organisational culture are apparent in the 1<sup>st</sup> empirical work.

In Company 1, as C1FM1 indicated the pressure to buy the ERP system comes mainly from himself in 2002. This claim was confirmed by C1MAcc1 who agreed that the pressure to buy the ERP system came from C1FM1 not from outside the company.

“C1FM1 wanted to make development in the company to prove himself to the senior management that the ERP system is fundamental to the success of the company.” (C1MAcc1).

C1MAcc1 indicated that the company’s senior management chose the ERP system to fit the size and the requirements of the company. However, C1MAcc1 wanted to make it clear that the company did not buy expensive software as a result of, or to apply, socio-cultural influence, e.g., as a means of showing off to other companies. Nor, for marketing reasons to show that the company is developing, or for political influences in adopting the ERP system; as C1MAcc1 stated:

“There was no pressure from outside the company to buy the software. The only pressure comes from the C1FM1 when he was appointed.” (C1MAcc1).

However, while the vanity was not directed outwards, it can be seen as directing inwards. It would seem that C1FM1 wanted to introduce the ERP system, and for it to be successful because he wanted to prove to the senior management that he had developed the work in this area to the advantage of the company.

While in Company 2 the culture of the company helped employees to accept and work well with the change, it is clear from the above analysis that Company 2 is

different from Company 1 in the fact that employees actually learned from each other. For example, C2Acc5 indicated that some employees photocopied their notebooks and shared them with other employees.

Another cause of informal learning was the notion of the 'initiator employee'. C2MAcc6's answer was the initiator employee has an important role in the change, in this, his view is similar to those of C2Acc5 and C2Acc7. The following explains the impact of training on employees to change in Company 2. I found that employees are required to train new employees from different departments for two weeks. As part of their training, a new employee moves between different departments for about 2 months. In Company 2, this policy helped C2MCM2 in the implementation of the ERP system, because employees could share their knowledge together. However this was not the case in Company 1, because employees worked individually.

Other causes that made employees learn the ERP system in Company 2 was the willingness of employees to discuss together their curiosities on the new system. Employees tended to talk with each other about the benefits that were provided by the ERP system. C2Acc7 indicated that the staff were always debating topics related to the ERP system and encouraging each other, for example, there was always information on the possibility of using the ERP system to help employees do their jobs. As has been seen above, employees in Company 1 did not engage in such discussions as a means of protecting their job security.

The interviews are not the only source of knowledge that I used to find that employees helped each other, my observation on them at work was also an extremely useful element of my research design. Through that context, I have heard and seen many of the staff when they were helping each other. In the case of Company 2, I also

observed the behaviours and heard the discussions of employees when walking to work from the mosque. On such occasions they were advising each other about some of the features of an ERP system that can improve their productivity.

From the above, while affected by externalities, it appears that the culture of the organisation *per se* did not significantly influence change in Company 1, because the policy of training Saudis did not change the behaviour of foreigners. However, it could mean that political and economic factors have more influence on foreigners than the organisational culture does, because it is through the former that policies such as the Sponsorship scheme and Saudization emerged.

In contrast, it could be said that the organisational culture of Company 2 did influence the behaviour of employees through, for example, the policy of more extensive training for new employees encouraging all employees help each other during the implementation of the ERP system. Besides the organisational culture there was religion and social culture which encouraged employees to help each other.

It is an important finding since employees *get used* to training others during the two weeks of training. After the implementation of the ERP system employees continue to teach each other, even though there was *no* policy to do so. It is an important finding of how policy as *rule* influences the behaviour of employees and is taken for granted through *routines*.

### **7.6.2. Organisational factors influencing resistance**

In Company 1, it was found that C1FM1 did not have power equal to what might be expected from his job title. For example, an accountant submits financial reports to the senior management but not to C1FM1 (see Figure 6.1 in Chapter 6).

As already mentioned (See Chapter 6), the formal structure of the organisation does not match the actual functional structure. C1FM1 pointed out that the formal structure of the company was written on paper, and it was different from reality because the management authority could interfere. The organisational structure shows that accountants contact C1FM1. However, interviews with three employees, including C1FM1 himself, showed that the accountants reported directly to the executive manager (C1FM1; C1MAcc1; C1MAcc2).

Another example shows that the formal organisational structure is only written on paper but does not appear in reality on that procedures are not being followed. C1FM1 said that there were some documents to be checked, but there was not enough time because the general manager had to leave for work outside the company. Thus the general manager ordered C1FM1 to sign the documents “with his eyes closed”, without auditing them, so the general manager could go. Nor could C1FM1 audit the documents after this as the document was immediately transferred to the bank.

I noted that C1FM1 is upset because the owners of the company manage the company according to their mood and not as he, and indeed others independent of the company, might see as being appropriate.

C1FM1 indicated many limitations inside the company, such as: senior management refusing to have an internal auditor, there being no human resource management, the existence of nepotism, not hiring the best people, no formal performance assessment and, in association, no employee development plans.

C1FM1 indicated that there is no job description for employees. The senior management asked C1FM1 to do a job description questionnaire for administration to

his staff, but he actually influenced employees to not complete the questionnaire, explaining why as follows:

“One of the owners wanted to do a job description, but I could not accept it, because it would take a lot of time, thus I convinced the staff that this is only temporary and they do not have to pay much attention to filling the job description. Then, after two months the owner was not interested in the job description”

An interesting fact is that the informal power that was used by C1FM1 could lead employees to resist. For example, he did not like the project of developing job descriptions of employees, so, by demeaning the request for job description information, he used informal power to suggest employees ignore the request for their job descriptions. This may be because C1FM1 felt he did not have enough power, and/or because he wanted to obscure what he actually does from senior management in order to get more power.

This finding supports Masquefa (2008) who indicated that social relationships could influence resistance to implementing a new system. Also, Bezuidenhout and Crombie (2009) showed that senior managers affect the implementation of change in the practice of management accounting. It is suggested that the interrelationships between these aspects must be included in management accounting research, rather than their being regarded simply as aspects to consider on a stand-alone basis, as though they are not affected by other existing aspects (Bezuidenhout and Crombie, 2009).

The following considers the barriers in Company 2 that faced C2MCM2 in the implementation of an ERP system. The C2DERP1 and C2MCM2 identified a number of difficulties in implementing the ERP system.

First, Company 2 tried more than one software before the ERP system but the implementation of these failed. In this case study I did not explore previous systems but I was told by C2DERP1 that the company modified the method of implementation to avoid failure in the previous implementations. For example the company ran the system in 2007 but the system did not work so the company tried to implement the ERP system in stages for each department of the company separately.

Second, C2DERP1 changed during the implementation. C2DERP1 and C2MCM2 did not provide any reasons for changing the manager of the ERP project, but the change affected the implementation of the ERP system. For example, C2DERP1 changed the implementation methodology; in the past the focus was to train people who already knew ERP, but since May 2010 the focus is on employees of the company who are experts in their job. C2DERP1 explained the reason:

“Training an accountant how to use the ERP is better than training a person who does not know accounting but knows the use of ERP”.

Thus, changing the manager of the ERP project could be one of the factors that delayed the implementation of ERP system. This supports the finding of Amid, Moalagh and Zare (2012) who showed that unstable managerial positions is one of the failure factors of implementing ERP systems.

Third, Company 2 faced many changes in its structure (See Chapter 6). In the past it was an independent company among four other similarly oriented companies. After the merger in 2000, however, it became one company and in 2012 that company was further reorganised according to the function of the company. Thus the structure was once again differentiated. Those changes increased the challenge for C2DERP1 and



C2MCM2 because they wanted the ERP system to work before and after the merger/demerger change in the structure of the company.

Fourth, C2MCM2 faced difficulties due to the ERP implementation decision which was made according to the (essentially uninformed) opinion of some members of the Board of Directors without proper study. For example, one member of the Board visited a branch of the company located in the city of Jeddah and, because he liked the procedure used there, he ordered the same system to be used in the rest of the subsidiaries of the company. Such decisions of the Board of Directors increased the challenge for C2MCM2, because they conflicted with the decision of the individual branch/company which had been using the procedure of the company that is located in Dammam rather than those used by the other subsidiaries.

The influence of the Board of Directors delayed the implementation of ERP, on that the procedure failed in Dammam, therefore Riyadh and Ahsa delay the implementation of the system until the problems are resolved in the city of Dammam. Therefore C2MCM2 was not totally independent because he had to obey orders from others such as a member of the Board of Directors who was not involved in the implementation team.

Fifth, C2MCM2 indicated that the process of implementation did not receive enough support from some departments in the company. C2MCM2 indicated that he established standards necessary for every candidate to become an expert in the ERP system. As he said:

“We have set certain standards in an employee candidate. These specifications are to be an expert in his work, the ability to work with a team, the ability to negotiate and be able to change. However, surprisingly we find the candidate does not have any of these criteria.” (C2MCM2).

He explained that some managers nominate employees just to get rid of these employees, but not because they obey C2MCM2 and provide appropriate people for the work. As a result C2MCM2 would have to send back the 'unmatched' or unsuitable employee and asked for an excellent employee.

The above findings are important because they can lead me to investigate why some managers deliberately nominate employees who are not excellent. Also, they indicate that the formal and informal power of C2MCM2 is important tool in the implementation of an ERP system.

In Company 2 some employees avoided learning. C2Acc5 indicated that this was because they did not want to become too useful as the manager relied on the employees who had knowledge of the ERP system and would not permit them to take holidays.

The above explored the organisational influences that influence employees to accept or resist ERP systems. The following section compares the organisational influences to the literature review.

External and internal factors play an important part of the reactions of managers, for example C1FM1 resisted the job description task since it had no value for him, thereby demonstrating that relatively powerful people such as him can influence employees to resist the requests of higher management. The finding is similar that of to Al-Jabri and Al-Hadab (2008) who indicated that strong predictors of attitudes towards ERP acceptance or rejection include both its expected value and perceived ease of use.

Also the findings agreed with Agourram (2009) who found that social and organisational culture influences the action of managers, in that managers want the

system to support their power over information and do not want to share information with other users. Therefore, my thesis should extend the discussion of the reasons of employees' acceptance of, or resistance to, an ERP system, rather than assuming that the expected value of an ERP system leads to change.

Perera, McKinnon and Harrison (2003) indicated that the focus on the acceptance of users to the ERP system helps to identify the factors that lead to resistance to or acceptance of the ERP system. However, they indicated that the focus of managers on the adoption of the ERP system is less helpful than exploring the factors that influence employees attitudes and behaviours. The significance of my 1<sup>st</sup> empirical work is in its focus on the attitudes of employees by including different employees such as Saudis and foreigners to examine how similar factors such as distrust of the ERP system interact with other factors to influence acceptance of, or resistance to, an ERP system.

It appears that the relationship between individuals is important for the success of an ERP system. The result agrees with Masquefa (2008) who pointed out that the success of the change process can depend largely on the nature of relationships between individuals within an organisation, e.g., strong ties can reduce the resistance to change. Also, Järvenpää (2007) indicated that there is potential power in these informal change involvements and mechanisms that should not be underestimated.

The evidence showed that C1FM1 used his relationship with employees to resist the job description project and to accept the ERP system. However, the relationship between foreigners is not strong, in that employees do not tend to help each other. Company 2 employees tend to help each other. The evidence shows that relationships

between individuals are important, but the more important findings are those that address what influences those relationships?

In that regard, I found that external factors such as politics and economics influence Saudis and foreigners differently. Although the interviewees were all Muslim and had very similar social cultures, their actions can facilitate or hinder the change. For example the cooperation between employees is different, because employees are affected differently by economics and politics. Employment circumstances, for example working within a private sector or a public sector company can also have an impact.

## **7.7.Conclusion**

This chapter presented my 1<sup>st</sup> empirical work, which aimed to explore the behaviour of employees and identify the factors that drive that behaviour. Saunders, Lewis and Thornhill (2009) indicated that exploratory case studies generally do not aim to make far-reaching conclusions and this was the case with my own. The section summarises the findings and shows that many factors interact with each other and influence both the acceptance of, or resistance to, an ERP system.

### **7.7.1. Factors affecting acceptance of, or resistance to, an ERP system**

The results of the 1<sup>st</sup> empirical work show that the answer to my research questions can be found in the analysis of the interviewees' responses. (i) why the change (introduction of ERP) happened, with particular reference to the socio-economic and socio-cultural contexts, and (ii) which factors might threaten to compromise change and lead to resistance to such change in management accounting.

The finding of the 1<sup>st</sup> empirical work shown in Table 7.2 below. It shows that employees are influenced by many external and internal factors and the response to those factors explains the acceptance of, or resistance to, an ERP system. The first part of the table shows the external factors such as politics, economics, social culture and religion which have different influences in both acceptance of, or resistance to, the ERP system, and the second part shows internal factors.

Table 7.2 Summary of the factors from the 1<sup>st</sup> empirical work

	Factors influencing reactions to change	Factors influencing resistance
Politics	Sponsorship system Government influence Saudization	Sponsorship system Saudization
Economic	Salaries	Resignation
Religion and social culture	Behaviour of employees	Nepotism in employing ERP system in English language
Technical issues	Advantages of ERP system Personal safety influences	Difficulty in implementing ERP system Inflexibility and mistakes of ERP system Lack of training
Organisational culture	Relationship between staff Individual learning Influences of C1FM1 to buy ERP system	Relationship between staff Lack of support by other department Older employees resist ERP system Employees avoid learning Functional structure Employees tend to work individually Influence of the Board of Directors

Source: Summary of the 1<sup>st</sup> empirical work findings

The 1<sup>st</sup> empirical work identifies many factors from politics, economics, social culture, religion, technical issues and organisational culture that influence the acceptance of, or resistance to, an ERP system. Those factors do not influence

acceptance of, or resistance to, an ERP directly but indirectly through the behaviour of employees. The behaviour of employees is important because it shows how they might react differently to different factors. In regard to my research, the behaviour of employees is the primary focus to understand for example, why employees use an ERP system since it provides mistakes.

The following section match the findings of the 1<sup>st</sup> empirical work (Chapter 7) with the literature review (Chapter 3). The section will generate a number of important implications to redirect the search in preparation for the 2<sup>nd</sup> empirical work.

### **7.7.2. Discussing the findings of the 1<sup>st</sup> Empirical work**

Chapter 7, the 1<sup>st</sup> empirical work was designed as an empirical study, its primary objective was to explore the credibility of my research design and the empirical implications of the preliminary research question rather than to provide theorized explanations.

The objective of the section is to highlight the difference between the theoretical and empirical explanation of acceptance of, or resistance to, an ERP system from the employee prospective. In the context of my research, for example: whether or not acceptance of, or resistance to, an ERP system are influenced by personal trust (Busco, Riccaboni and Scapens, 2006), power (Yazdifar, et al., 2008) and strong and weak ties (Masquefa, 2008). This section demonstrates that the 1<sup>st</sup> empirical work achieved precisely that objective.

Recognizing and making sense of the conflicts between the findings of the literature review (Chapter 3) and those of the 1<sup>st</sup> empirical work (Chapter 7) represented a more challenging element in my research. This also enriched my research

significantly, since the issue of how routine can influence employees and lead to their acceptance of change rather than resistance to it had not been thoroughly studied in the literature in Chapter 3

In conducting the research for my thesis, I faced great challenges. The first challenge was the difficulty of obtaining agreed definitions for institutions, rules and routines. The second challenge, as I explained in Chapter 3, was that there are few studies that identify the factors that affect the acceptance of, or resistance to, an ERP system. The third challenge was that the relationship between factors is not a linear relationship but an inter-relationship. This means that I could not focus on one particular factor and ignore other factors.

These three challenges created pressure to conduct the 1<sup>st</sup> empirical work. Therefore the 1<sup>st</sup> empirical work aimed to identify those factors that affect employee behaviour, to explore the relationship between them, and to identify the most influential factors.

Therefore, the 1<sup>st</sup> empirical work focuses on the role of employees to explain their actions that are related to external or internal causes. The 1<sup>st</sup> empirical work did not find any evidence that the institutionalisation as explained by Burns and Scapens plays a part in explaining resistance. None of the interviewees in either companies indicated that their resistance to an ERP was due to their preferring the routine prior to implementing the ERP system. For example, C1MAcc1 accepted the ERP system, although he felt that he lost the value of his previous experience, because he felt that he started from scratch in doing his work. C1MAcc1 has 16 years of experience and he was used to the old accounting system, but a political factor such as the Sponsorship system and economic factors such as the salary gave him no opportunity to reject the

ERP system since to do so would be likely to result in him losing his job to be replaced with a Saudi. Furthermore, C2MCM2 indicated that age, again not connection to institutionalisation, is one of the important factors that led to resistance. This aspect was investigated further in the 2<sup>nd</sup> empirical work and will be discussed in Chapter 8.

There are two particularly important findings of the 1<sup>st</sup> empirical work. The first is that the behaviour of employees plays an important role in explaining the inter-relationship of external and internal factors in the acceptance of, or resistance to, an ERP system. Most of the interviewees in both companies indicated that they accepted the ERP system as a reaction to some external or internal factors, but not as a result of their need to follow formal orders, as Burns and Scapens (2000) suggested. Second, C1FM1 exploited the behaviour of employees to influence change in ERP system and resistance, for example in the project of job description, by using both his formal and informal power. Therefore, exploiting the behaviour of employees is important to understand the acceptance of, or resistance to, an ERP system.

My thesis contributes to knowledge in the area of change within the working systems of management accountants by problematizing the role of the Burns and Scapens' (2000) framework in the picture created by my research on change within the work technology of management accountants in Saudi Arabia.

The 1<sup>st</sup> empirical work showed that contradictions of the information that is provided by the ERP systems can influence Saudis to change and help other employees. However, contradictions also helps foreigners to keep their jobs, because other employees can't easily perform each others' jobs. This finding suggests that the influence of contradiction on the active employee only explains one part of the story.



Therefore, I need more insight from employees on the 2<sup>nd</sup> empirical work on the role of contradiction on acceptance of, or resistance to, an ERP system.

The results of the 1<sup>st</sup> empirical work showed that the behaviour of individuals can be affected by external and internal factors. Moreover, including other factors is important to explain the behaviour of employees such as politics, economics and religion. By including more factors it is possible to explain how a particular factor such as distrust and contradiction can influence both acceptance of, or resistance to, an ERP system. Therefore, the 2<sup>nd</sup> empirical work will focus not only on how each factor influences resistance and change but also how the factors interact with each other.

The objective of the 1<sup>st</sup> empirical work was to explore issues of acceptance of, or resistance to, an ERP system, to say clearly what are the causes of change or resistance, why change happens, and what is the role of the agent in the acceptance of, or resistance to, an ERP system. After the 1<sup>st</sup> empirical work study I understand that the original research question: 'What are the causes of acceptance of, or resistance to, an ERP system?', must be extended to consider 'How do agents react to these causes and why?'

Thus, the results of the 1<sup>st</sup> empirical work have implications for the design of the main study. The main effects are in regard to the concept of the behaviour which helps to explain acceptance of, or resistance to, the ERP system. It is the causes of behaviour rather than the behaviour per se which help to provide that explanation. Research questions of the 1<sup>st</sup> empirical work were derived from the behaviour, but the data indicates that the employees talked about the causes of their behaviour. Employees talked about external factors such as social culture and religion as important factors that played a major role in the behaviour of the employees. Therefore, the focus should be on the causes that generate the behaviour but not only the behaviour per se.

The findings of the 1<sup>st</sup> empirical work led to a re-conceptualisation of my research question and to a number of changes in my research design. The 1<sup>st</sup> empirical work helped to set the primary focus of my thesis, i.e. that the focus is not only on the causes of acceptance of, or resistance to, an ERP system, but on how these causes affect the behaviour of employees and how the behaviour of employees influences acceptance of, or resistance to, an ERP system. Thus my research question changed to study the behaviour of the participants.

According to the discussion and the results that have been reached, I formed my research question of the 1<sup>st</sup> literature review to take the following shape:

- (i) What is the importance of agents, and what personal and environmental influences affect the implementation of the new ERP system?
- (ii) How do individual agents bring about institutional change?

My research questions redirected my research design and were an important step to identify the 2<sup>nd</sup> literature review as discussed in section 5.1.1. Research design.

### **7.7.3. Implications for research design**

Let me now stress the importance of the 1<sup>st</sup> empirical work over time. I came back to the findings of the 1<sup>st</sup> empirical work three times. The first use of the findings of the 1<sup>st</sup> empirical work was to answer the questions from the first literature in Chapter 3 : (i) why the change (introduction of ERP) happened, with particular reference to the socio-economic and socio-cultural contexts, and (ii) which factors might threaten to compromise change and lead to resistance to such change in management accounting.'

The second use of the 1<sup>st</sup> empirical work findings was to identify the shortcomings of the literature used most commonly in this area of work. In the case of my study, this aspect of my study led to a more comprehensive literature review in Chapter 3. However, the purpose of the literature review in Chapter 3 was to identify different views in discussing the reaction of management accountants to the introduction of a change to their work. These can be seen as follows: first, identify different studies that focus on the change on management accounting; second, identify the level of the investigation; third, review studies that conceptualise the changing process of management accounting. Therefore the 1<sup>st</sup> empirical work can be seen as a means to narrow the relevant studies and informed my research question for the 2<sup>nd</sup> empirical work.

The third use of 1<sup>st</sup> empirical work findings comes when conducting the 2<sup>nd</sup> empirical work. I extracted the findings from the 1<sup>st</sup> empirical work and 2<sup>nd</sup> empirical work together. Comparing the response of interviewees in this way is important, because it drives the investigation of the causes of acceptance of, or resistance to, an ERP system. For example, when I asked some of the interviewees the same questions I asked them in the 1<sup>st</sup> empirical work, I was surprised that their answers were opposite to what they had said before (See the 2<sup>nd</sup> empirical work in Chapter 8).

To conclude, the first data analysis of the 1<sup>st</sup> empirical work was itself exploratory in its nature. It did not aim to arrive at powerful conclusions, but to answer the preliminary research question about the causes of change, and also to gather information of importance for the investigation, for example information related to the implementation process and the types of training.

#### **7.7.4. Implications for the method of collecting and analysing data**

Here I will discuss gaps in the 1<sup>st</sup> empirical work to try to overcome in the next 2<sup>nd</sup> empirical work. It became clear that there are multiple influences on the behaviour of staff, and it is impossible to control. Some employees for example, in Company 1 I did not talk about the advantages and disadvantages of the ERP system. Also, more experienced employees did not want to talk about some issues, such as their ability to use the ERP system, because they felt as if their past experience and knowledge disappears and they become no different to new employees.

Therefore, I had to think about the method of collecting data from employees and I found that using the triangulation approach for data collection helped in obtaining the required data. Yin (2009) indicated that rival explanation from different source is needed to understand the influence of a factor on a result.

Therefore, my plan was to conduct a larger number of interviews with employees in different categories, such as by role (manager and employees), by experience (employees with more experience and employees with little experience), by nationality (foreign employees and national employees), in different period of time, such as I asked C1FM1 questions in the 1<sup>st</sup> empirical work and asked him the same questions again in the 2<sup>nd</sup> empirical work to see if there was any differences in his answers.

The level of trust and openness in the interviews would be directly related to the validity of the findings. As the question of C2MCM2 (See 7.9. Organisational factors) demonstrated the importance of social networks, as they can lead to increased trust and openness. Therefore, in designing the main study, I decided to increase the number of

meetings by using the snowball technique. For the analysis of the interviews, the 1<sup>st</sup> empirical work demonstrated that my skills are limited in term of analysis. Therefore I have to develop my skills analysis for the 2<sup>nd</sup> empirical work. I explained the method of analysing data in Chapter 5. The following chapter discusses the 2<sup>nd</sup> empirical work.

## **Chapter 8: 2nd Empirical work**

### **8.1.Introduction**

This chapter shows the results of the analysis of the data conducted in the 2<sup>nd</sup> empirical work. This chapter is structured as follows: it starts with discussion of the objective of the 2<sup>nd</sup> empirical work. Then it presents the factors from social culture and religion, technical factors and organisational factors. Finally it presents the findings and implications of the 2<sup>nd</sup> empirical work for my research as a whole.

### **8.2.The objective of the 2nd empirical work**

The 1<sup>st</sup> empirical work identified a number of factors such as politics, economics, social culture and religion and technical and organisational factors. The results of the 1<sup>st</sup> empirical work have implications for the design of the main study. The main effects are on the concept of the behaviour which helps to explain acceptance or resistance to use the ERP system. The findings showed that the behaviour of employees plays an important role in explaining the inter-relationship between external and internal factors on the acceptance of, or resistance to, an ERP system. Table 7.2 in Chapter 7 summarizes the factors from the 1<sup>st</sup> empirical work.

The findings of the 1<sup>st</sup> empirical work led to a re-conceptualisation of my research question and to a number of changes in my research design. Thus, the 1<sup>st</sup> empirical work helped to reset the primary focus of my thesis, extending it so that it is not only on the causes of acceptance of, or resistance to, an ERP system, but on how these causes affect the behaviour of employees, and how the behaviour of employees influences acceptance of, or resistance to, an ERP system. According to the results and the discussion that have been reached, I re-formulated my research question of the literature review to take the following shape:

(i) What is the importance of employee agency, and what personal and environmental influences are there, in effecting the implementation of a new ERP system?

(ii) How do individual agents bring about institutional change?

The 2<sup>nd</sup> empirical work gathered more evidence on how the response of employees to external and internal factors can facilitate change or create barriers, or resistance, to change. I asked employees these questions:

1- What factors affect your ability to do your job as an accountant?

2- What kind of information do you need to do your job and how available is this?

3- What factors influenced the implementation of the new system?

4- What influences training or development within the company. Is this sufficient for your needs?

5- What is your main authority within the company?

6- What positive and negative influences does the new system have on your job?

7- What positive and negative factors influence the implementation of ERP?

8- Is the User's Guide of the ERP system available?

9- Do your colleagues train you in ERP?

I reformulated the questions to address the company hierarchical position of the interviewees; for example, the question that was asked of the change manager department focused on the process of the implementation of ERP and the plan that was used to overcome the limitations of the implementation.

### **8.3. Religion and social culture**

#### **8.3.1. Religion and social culture influences change**

The 1<sup>st</sup> empirical work showed that religion affects the behaviour of the employees. The 2<sup>nd</sup> empirical work aimed to collect more evidence about the impact of religion and social culture on the behaviour of employees. Both foreign employees and Saudi interviewees were Muslims and, as such, might be thought to have a similar social culture. However, the behaviour of foreign employees was influenced by political factors, such as the Sponsorship system and economic factors in addition to the influence of religion and social culture. The evidence of the influence of religion and social culture on the behaviour of employees came from Saudis but not from foreigners.

The majority of the Saudi interviewees said that one of the factors that motivates them to help one another is that adopting that behaviour is central to the religion of Islam. They are Muslims, and are affected by the directives of the Prophet Muhammad. For example, C2Acc15 said that the Messenger of Allah, Muhammad – peace be upon him – said the most complete believers in faith are finest in attitude and gentler with their family. Moreover, the finest of people are more helpful to other people.

C2Man4 stated that knowledge does not belong to anyone; everyone should learn. He said he used to tell everyone everything he knew. He also said that religion teaches us to smile, and thereby gain reward from God. However, he told me that a



foreigner is only committed to his job and does not meet others, but there is cooperation between him and other foreigners (C2Man4). The cooperation between the staff made the staff accept the ERP system, because employees can overcome the difficulties they faced when they use the ERP system.

C2Acc17 and C2Eng2 said they had received great help from Saudi colleagues, but not foreign colleagues. For example C2Acc17 said that a Saudi employee took a course in ERP and devoted an hour every day to training his colleagues. C2Acc15 reported another method of assistance where a Saudi employee does not wait for anyone to ask him, but if he finds something on the Internet, he prints it and shares it with his colleagues. Furthermore, C2Acc12, C2Acc15, and C2Eng3, who are all Saudi, pointed out that they prepared some useful material on the ERP system for their department and shared it with their colleagues.

On examining the interview, the causes of employees' behaviours, many participants indicated that social culture and religion had influenced their behaviour for a long time, and it has become a repeated behaviour pattern. There are many things that make staff become closer to one another. C2Acc12; C2MAcc18; C2Man4 pointed out that they used to help others. C2MAcc18 said that it is unusual not to help each other.

There is significant cooperation between Saudi colleagues. C2Acc21 said that people cooperated with him very well. He indicated that after working with them for one month, he felt that he had known them for a long time. He said he had not expected this. Equally C2MAcc18 said there are people who love to help others and love others to have better lives.

From a social culture point of view, other factors that make employees become close to each other, are that employees in some cities gather outside the company three

times every week for a social event. Possibly in part because of that, C2Acc24 stated that he did not feel that he was under any pressure at work; he felt as if he was in an entertainment centre because relationships between employees are so good.

The above evidence shows that 10 interviewees indicated the behaviour of an employee is influenced by many factors, including religion and social culture. It is not necessarily that the religious or social culture rules and norms themselves have a direct influence on the behaviour of an employee, but it is their interpretation of how they ought to behave in accordance with those aspects that can make the difference. Once the interpretation has been made, most likely sub-consciously, behaviour patterns become set and repeated. Therefore, the repeated behaviour patterns of an employee play an important role in the action of an employee.

### **8.3.2. The influence of religion and social culture on resistance**

The 1<sup>st</sup> empirical work showed that nepotism and the view of senior management can represent an obstacle to change. Nonetheless, at that stage I did not collect any direct evidence of the negative influence of religion and social culture on the behaviour of employees. Thus the 2<sup>nd</sup> empirical work aimed to whether the impact of religion and social culture on the behaviour of employees could be negative and, as I have already indicated above, there was evidence of that in the 2<sup>nd</sup> empirical work. The evidence emerged mainly from consideration of social culture and the context of religion and it is to a discussion of such circumstances that I now turn. In this section, I will discuss socio-cultural and religious influences on attitudes towards criticism, learning, reading and, in an alternate way, the impact of the Saudi weather on socio-cultural attitudes. First though I will discuss the attitudes towards the Shia Muslim.

### **8.3.2.1. Attitudes towards Shia Muslims**

Religion and politics affect the decisions of Company 2. Company 2 does not give any powers to the employees in a particular city because they are Shia Muslim<sup>21</sup>. Moreover, Shia cities do not have high-level managers and decisions are made in another city (C2Com2).

As already mentioned, religion influences some employees to help or not to help each other. C2Acc17 said his director did not help him because the director had a different religion. C2Acc24 said that in some areas help might or might not be given according to the accents of different colleagues, because accent gives a sign of an area in which someone lives which, in turn, is linked to a particular religion. As a result of that, as a number of participants said, some staff did not respond to the phone if the caller is from a particular area as noted by the caller ID. Therefore, in order to have his query addressed, such an employee has to make the call from his mobile phone or a phone number from outside the company. C2Man3 said that, a Saudi national employee would not respond to the phone if the call came in from a particular area whereas, if the employee for example is from the Philippines, he would respond to the phone directly. C2Man3 said another reason was due to the company's culture, where the main office responds quickly to finance department but it does not respond quickly to the enquiries about human resources department.

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<sup>21</sup> There is conflict between Shia and Sunni, for example in 1987 Iranin Shia terrorists attack Makkah.

I found that if employees are of different branches of the Islamic religion, they may not cooperate with each other. However this phenomenon cannot be generalised because I found that one of the subsidiaries of the company did cooperate with another, even though they knew that the branch was staffed by Shia Muslims. There is considerable diversity in the Islamic religions and it is not possible to predict exactly how people will interact on the basis of the branch of Islam that they follow.

In that context, C2Acc23 said that religion does not negatively affect their cooperation with some colleagues if they all deal with people morally. This is an interesting issue that is perhaps not about religion directly, but the moral code of religion is likely to affect values in a positive way, ensuring help and cooperation.

### **8.3.2.2. Attitudes towards criticism**

I consider the result that I discuss now to be one of the most important results of my thesis, because it shows very clearly the importance of understanding the behaviour of individuals in the context of understanding their perspective on resistance to or acceptance of a change such as the introduction of the ERP system.

I asked employees about the effectiveness of training. 'What influences training or development within the company. Is this sufficient for your needs?'

Many employees said that the training was not effective because of its short duration. However, there was only one employee who explained cultural influences on the poor level of training. C2Com2 indicated it was socio-culturally alien to criticise people directly and, as a result employees do not accurately assess teachers/trainers and the quality of their courses. He indicated that employees show a high degree of empathy when they evaluate the teacher saying that, after he saw the teacher's "harmless eyes",

he was embarrassed and gave him an 'A-plus' score even though the trainer could not deliver the knowledge necessary for their learning about the new system.

However, an alternative interpretation could be that the trainer, knowing the socio-cultural circumstances, has exploited the situation knowing that employees/trainees would give him a better evaluation. The trainer knows that not to criticise others is part of a religious / cultural reaction. Therefore, knowing how employees might behave, he exploits the social culture of the organisation leading to an employee give him a better evaluation rather than improving his attitude and ability towards the quality of his training delivery. The finding is important because it explains to us how the trainer was able to get excellent ratings when he was poor at delivering the training.

From the previous finding it is clear that cultural or religious predispositions might themselves raise barriers because there is an awareness of the importance of not 'losing face'. Therefore, in order for the teacher (in this case) not to suffer such a loss of face, the employees did not give him constructive criticism on his performance. However, the result of this is that they then found themselves unable to do their work properly because they had not learned anything from him. As a result, they might be in a position of losing face themselves.

### **8.3.2.3. Family influences on accepting ERP**

The social culture such as the importance of the family and the action of some managers can affect the decision of employees in learning the ERP system, this delays the implementation of the system.

There is evidence that the culture of Saudi Arabia could create some challenges for employees to learn ERP. Some of the staff live with their parents, or close to them. C2Acc24 said that he lived with his parents in an apartment in the same house and that he did not want to move away from them. Equally C2Acc19, and C2Mar1 both explained that they actually changed their job to go to another company because it is closer to their parents' houses. By digging into this finding more deeply, it became more apparent what the links between ERP, change, managers' behaviours and living close to parents might be.

Some managers who rely on employees who use the ERP system do not allow them to have vacations on the time they want. C2Acc26 related an example of a person he knew who was not from either company, who had refused to learn the ERP system because if he did, his manager would not allow him to be late to work, or to go home early and those restriction this might require him to move away from his family home. Therefore, employees would lose some of the advantages obtained from the organisation if they use the ERP system.

#### **8.3.2.4. Attitudes towards personal contact, the telephone and reading**

As described in Chapter 6, in the main branch of Company 2, expert users who had specialist training to solve technical problems were utilised; nevertheless, in many cases they could only solve some of the problems. Employees who worked in other branch offices of the company could get help only by telephone or the Internet. Therefore, telephone and the Internet are considered the main source of help for technical problems.

Nevertheless, I found that social culture influenced the behaviour of employees representing a potential obstacle to the successful introduction of change because some staff are not yet used to receiving help by phone. Ideally, from their perspective and both for them and the successful introduction of change, they want to see the person who is to help them (C2MAcc18). Such attitudes are particularly important because they will substantially affect the level of access to technical services and the extent to which the introduction of change can proceed smoothly or not.

The majority of interviewees indicated that the Saudi employees depend largely on receiving information directly from other people. Therefore other sources of learning, such as reading, are not commonly considered. Furthermore, many employees indicated that in the face of a problem, they would like someone to tell them how to resolve it; they did not want to read the instruction book (C2MAcc6; C2Acc7; C2Acc16).

However, C2MEng1 stated that he preferred a short instruction book because he could find the information easily. However, he indicated that the size of the instruction book was very important, and remarked he would find it very difficult to read from a large manual especially if he has come back from field work in the summer. The company provided electronic educational material, but C2MAcc6 reported that the staff did not read it routinely. C2Acc23 claimed that the company's web site did not have the technical support information. However, when I asked him to explain further, he admitted that he had never actually visited the web site. He further explained that he was not convinced of the use of CDs for education, and that he had received better learning result after another employee trained him.

C2MEng1 said the main factor influencing employees not reading was that some managers did not give them the time to do so. C2MEng1 said the manager wanted him to deliver a report about a particular task after two hours, but that he could not read and research how to prepare reports in that time, let alone produce the report itself.

Many employees said that the culture of the organisation was the cause of their lack of engagement with research or reading (C2MCM2; C2Acc5; C2MAcc6; C2MEng4). They wanted someone to tell them the solution, not to have to look for information on their own as well as doing their job. At the time of conducting my research, staff had not yet become used to using the ERP system itself as a source of information. Although they were aware that information could be found in the ERP system, they did not use it directly. Instead, employees go to the coordinators, coordinators go to the Training Coordinator, and then the Training Coordinator learns by learning and practice (C2MEng4)<sup>22</sup>. However, there is a need to bring into the picture here the factors that employees are not able (because of time constraints affecting what can be allocated to reading), or perhaps willing (because of socio-cultural attitudes affecting inter-employee relationships) to try for themselves to overcome some of the difficulties of using the ERP system.

#### **8.3.2.5. The influence of the Saudi weather on attitudes**

Strange as this factor might appear, the weather in a country such as Saudi Arabia has a significant role in staff attitudes to work, including the level of cooperation

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<sup>22</sup> The role of the Training Coordinator is similar to the role of the change agent in the findings of Sharma, Lawrence and Lowe (2010).



between staff. Weather could affect the employee's performance, but it is possible that some foreign employees would not acknowledge this aspect because doing so could be seen as them showing weakness.

The temperature in summer in Saudi Arabia can reach 60 degrees in the day time and 42 degrees at night. People feel the temperature as higher than is advertised because they might be moving from a cold place to a hot place, and because the high level of humidity makes them feel hotter than the actual temperature. As sweat cannot evaporate due to the humidity, it is harder for the body to cool down thus making the problem worse. I conducted interviews in the summer, and noted that the staff seemed impatient and moody.

C1MAcc2 stated that in 2004 he worked in the stores where it was hot and there was no air-conditioning. He was not satisfied. Now he works in an office with air conditioning and that has affected his attitude to work in a positive way. However, C1MAcc1 (a non-Saudi) stated that weather did not affect his performance and this may be due to the employee not wanting to show that he is facing difficulties in performing his work, and that discussing the influence of the weather on their performance is not seen as acceptable. C2MEng1 said that he went out on a field trip in the morning, and at noon his manager asked him to do a report within half an hour. C2MEng1 said that the weather was hot and he had no time to read, and he wanted something short such as following certain steps to make the report.

In 2011, the Ministry of Labour launched a system preventing any employees from outdoor work (in the sun, 12-3 pm) during July and August (Hamid, 2011). This decision applies for all staff, except in oil and gas companies, and maintenance workers

in cases of emergency. It should be noted that the decision was active after 07/06/2011, while the interview with the C2MEng1 was on 23/07/2011.

It seems that high temperatures can affect the behaviours and attitudes of employees, resulting in an even greater resistance to reading instructions and need for direct and short guidance in order to use the ERP system effectively. Managers' lack of tolerance for these circumstances could be seen as lack of respect for their employees leading to more resistance on the part of the employees.

### **8.3.3. Discussion of the influence of religion and social culture**

The literature review in Chapter 3 showed that social culture is important in the context of Saudi Arabia. Unfortunately, none of the interviewees in the 1<sup>st</sup> empirical work indicated any negative influences of religion or social culture on the behaviour of employees. Therefore I aimed in the 2<sup>nd</sup> empirical work to examine whether or not there was evidence of the negative impact of religion and social culture on the behaviour of employees.

Results from the 1<sup>st</sup> and 2<sup>nd</sup> empirical work show that religion and social culture can influence the behaviour of employees. They also shows how the behaviour of employees can facilitate, delay or even prevent the change to using ERP systems in Saudi Arabia. Saudis said that religion and social culture affect their behaviour, but foreigners did not speak about these issues in regard to their behaviour.

Evidence showed that religion can encourage cooperation between staff, which facilitates the success of the ERP system, However. Religion can influence non-cooperation between employees as explained previously. Some Saudi staff did not cooperate with each other and some did not respond to the phone if it came from certain

cities in Saudi Arabia. The behaviour of employees for example, the cooperation between staff, helped the implementation of the ERP system. Burns and Scapens' (2000) framework focuses only on formal rules within the company. Thus, the Burns and Scapens' (2000) framework can be developed to include the influence of other factors such as religion and social culture. By including the influence of religion and social culture to the Burns and Scapens' (2000) framework, it is now possible to understand the relationship between rules 'such as religion and social culture', the behaviour of employees and the institutionalised behaviour. If I use the development of Burns and Scapens' (2000) framework as a lens, I can see that religion and social culture influence the behaviour of employees. The behaviour of employees is repeated over time and eventually becomes institutionalised. In a general sense, helping each other is normal behaviour for Sunni Saudis, but not necessarily for foreigners, because some political regulations in Saudi, such as the Sponsorship system, applies only to foreigners.

Moreover, Company 2 did not give authority to some employees from certain cities. Also, for a political reason, Company 2 does not authorise managers in some cities to make decisions about work, that being on the basis of their religion. This finding is consistent with, but arguably adds to, Pfeffer's work (1992). Pfeffer, although not considering the factor of religion, suggested that hierarchical authority is limited. This is because people need the cooperation of others who do not fall within their direct chain of command. My thesis suggests that position in a hierarchy in my case study companies, is related more to connections including nepotism and religion. In other words, those at the top, with the authority, might well not be the people best qualified for such authority. In this respect, my study demonstrates, amongst other things, that one of the problems being experienced in both of my case study companies is a result of senior managers wanting to introduce a system more amenable to a less autocratic

system than is present in Saudi. The problem lies in the fact that there appears to be no intention to reduce the autocracy. As a result, it is difficult for managers to have the system accepted in such a way that it can operate properly, efficiently and effectively.

Interestingly, the negative impact of the religion, such as a lack of cooperation and not answering the phone, can actually facilitate the use of an ERP system. This is because employees viewed the ERP system as a method to connect other employees to obtain the required information. Therefore, other employees had to respond to a request that was recorded in the ERP system whereas they would not respond to a telephone request from certain employees (i.e. Shia Muslims).

Scapens and Jazayeri (2003) indicated that the advantages of the ERP system itself helped facilitate the change. In my research that does seem to be the case. The system helped to overcome some of the problems that were caused by religion and social culture in Saudi Arabia, such as non- cooperation between employees.

One of the most important contributions from my research is the indirect obstacles of culture to change, such as a trainer exploiting cultural factors thus making employees gave him higher points on evaluations than he deserves leading to misapprehension on the effectiveness of the training he has delivered. As a result, the inadequate trainer remains in the company. It is clear that cultural factors have an impact on the behaviour of employees, that the behaviour of employees can be exploited and that those factors could be barriers to change.

Empathy does not help senior management to do their newly organised work efficiently. Thus, it is likely that poor control of training could delay the effective use of ERP. The results demonstrate the essentially hopeless position these companies were in

concerning introducing ERP, mainly because they did not take any of these issues into account and instead introduced the system in an autocratic manner.

These findings are similar to those of Sharma, Lawrence and Lowe (2010), who found that for socio-cultural reasons employees just keep silent in formal meetings, so managers have to do the meetings informally to have an insight from employees.

Although, in this context, my findings and those of Sharma et al. are similar, the weakness of their study is that they focus on the change agent but do not discuss in depth the factors that influence the behaviour of employees. Also they do not show how senior management exploits the social culture of the organisation to make the implementation successful or otherwise.

Cultural factors also affect the behaviour of employees. The 1<sup>st</sup> empirical work did not reveal the availability of written documents that supported the use of ERP system. Nonetheless, interviews in the 2<sup>nd</sup> empirical work said that those documents do exist, but that they had no interest in reading them. It is an example of the impact of an element of social culture on the behaviour of employees, such as being disinclined to read because of the more prevalent oral tradition of communication in Saudi.

To conclude, religion and social culture can have both positive and negative influences on the behaviour of employees. The positive influences, such as cooperation between employees, can facilitate the change. The negative influences, such as non-cooperation between employees, can be barriers to change. However, some of the negative influences of religion and social culture can possibly facilitate the use of an ERP system, for example the ERP system helps employees contact other employees, who, under normal circumstances, would not co-operate in taking the contact.

Taking into account the influence of religion and social culture on the behaviour of employees is important to the success of the change. Companies cannot change the influence of religion and social culture on the staff, but they can use that influence to facilitate change. From my research it is clear that to understand the behaviour of individuals is important to understand the causes of acceptance of or refusal towards any ERP system. My research suggest that the behaviour of employees can be manipulated by others such as with the trainer who exploited religion and social culture to achieve an excellent rating. Therefore, it is the responsibility of companies to identify any manipulation of the behaviour of employees.

## **8.4. Technical factors**

The 1<sup>st</sup> empirical work showed that the benefit of the ERP system helps towards change. Also the limitations of ERP such as providing mistakes, make employees use the ERP system to protect themselves against any liability of senior management. The 2<sup>nd</sup> empirical work aimed to collect more evidence on the influence of technical factors on acceptance of, or resistance to, an ERP system.

### **8.4.1. Errors within ERP**

The 1<sup>st</sup> empirical work indicated that personal safety issues affected the acceptance of ERP systems. In the 2<sup>nd</sup> empirical work I gathered information about the influence of personal safety on acceptance of, or resistance to, an ERP system.

C2Acc7 said the ERP system had errors so employees did not trust the system. However, if employees searched for, and incorporated into their reports, better information (not from ERP) the department would hold them responsible if there were errors. C2Acc7 said the company bears the risk of errors in the ERP information. This

explains why employees are strict with using the ERP system even when they know there are problems with the information.

C1MAcc2 and C1Acc3 said that using ERP allows a more comprehensive vision of the company, does the job faster, gets quicker results, and provides them with a sense of psychological comfort. That sense of comfort is developed because the ERP system takes all responsibility for the accuracy, or inaccuracy, of information (C1MAcc2; C1Acc3).

The finding of the 1<sup>st</sup> empirical work suggests that not only does increased trust in the ERP lead to change but also, perhaps somewhat paradoxically, that less trust in the system could make employees use it more. That is because employees feel safe if not holding any responsibility for accuracy of information. For example, in Company 2 the employees use the ERP because it gives them power if there are any mistakes, as the ERP system protects them. They have been instructed to use it so they do so, knowing that there are problems but also knowing that they cannot be blamed for those as they are not allowed to use their own initiative. A similar finding can be found in Johansson and Sivervbo (2009), who found people are self-interested and tend to protect themselves behind people inside the organisation who have power. My evidence adds to that though by demonstrating that such behaviour has negative consequences for the company, but yet senior managers persist in their autocratic style of management.

#### **8.4.2. Positive experience with IT**

C2Acc13 said the result of the use of technology in general is positive. For example, Before the introduction of the ERP system, Company 2 implemented an electronic payments system so that customers do not have to go to the company to pay their bills. Therefore, employees in Company 2 were positive about using IT, since the

number of help desk customers decreased from around 1000 customers to about 100 customers (C2MMan5). The success of the payment system meant that employees were optimistic about using an ERP system.

C2Eng3 stated that after using ERP, he wanted to make more use of information technology in his work. For example, he said he wanted to use the device's model to use hand-held devices (linked electronically to the ERP system) to record information (C2Eng3).

The role of the ERP system in the process of change is similar to that examined by Scapens and Jazayeri (2003), in that the ERP system can help in the change, but it is not guaranteed the change will happen. Nevertheless, C2Acc15 said, in the context of Company 2, that the ERP system created an atmosphere of cooperation between employees. This finding is what might have been anticipated given the public nature of Company 2.

### **8.4.3. Technical factors influence resistance**

The 1<sup>st</sup> empirical work showed technical problems which affected the acceptance of ERP systems. In the 2<sup>nd</sup> empirical work I gathered information demonstrating more technical problems including four barriers; difficulties to give employees access to ERP, ambiguity and lack of clarity of the information that is provided by ERP, lack of flexibility in the ERP and translation of English language is not appropriate. I will now discuss these.

The first barrier is Authorisation. C2Eng2, C2Com2 and C2MEng4 said that there was not enough authority to access data and perform a particular task and the reason for this is two-fold. First is the hierarchical nature of structure and authority in



Saudi Arabia in general and second is the fact that building authority protocols into the system requires spending money for programming and maintenance in the future. Therefore, coupled with the nature of authority within Saudi, the high cost of the ERP system is a hindrance in giving the company the necessary flexibility to make the implementation successful.

The general issue of authorisation of staff to access ERP in the context of Saudi Arabia is interesting in its own right, but in the context of my study it represents another barrier for the successful introduction of an ERP system. Evidence shows three problems related to authorisation. These are: that it is difficult to have authorisation, the problem of employees using their managers authorisation to access ERP, and that authorisation is linked to people not the job, so some employees do not know what authorisation they have or should have or how to use it (C2Eng2; C2Com2; C2MEng4).

In addition, the work can be delayed because the authorisation stays with the employee, so if the employee moves to a different department, the authorisation is transferred with them, whether or not they need it in their new position. The factor may be due to the high cost of transferring the authorisation (C2Eng2). However, C2MEng4 said there were people who had authorisation, but did not know how to use it.

The second barrier is ambiguity. Resistance to the ERP system could be due to the lack of clarity in the information about it that employees received. Some of the staff suggested there was such ambiguity; for example, the employee could not receive more details on the information they got from the ERP system, because they do not know the source of information (C2Acc5).

The third barrier is the lack of flexibility in the ERP system. The ERP system was not used in every aspect of work, yet some data was not entered in the ERP when it

needed to be. For example, the data of a retired employee was not entered directly into ERP in a timely manner, but was dealt with in an Excel file for one month before being entered into the ERP system. It was also noticed the ERP system was not used to support internal decision making (C2Acc7). C2Eng2 said the ERP system had some limitations because it required many detailed entries, which must be made in a specific order that was different from the actual procedure.

The fourth barrier is the translation of the written instructions into the English language. The 1<sup>st</sup> empirical work suggested that language was a barrier to implementation therefore in the 2<sup>nd</sup> empirical work I asked the following question: ‘What factors affect your ability to do your job as an accountant?’ in order to determine whether this was a factor of resistance or change.

C1FM1 indicated that before 2001 the accounting system was in Arabic. However, he recommended that the ERP system should be in English. C1FM1 explained that this was due to the fact that the Arabic translation of the terminology of the ERP system was not accurate. However, it was apparent to me that C1FM1 in fact wanted to show to senior management that he could use the ERP system, while the rest of the staff could not because they were not fluent in English.

Although accountants had English language courses, some of them still found it difficult to use it (C1Acc3; C1MAcc1) and this became problematic for the system as a whole. A young accountant who had only six months of experience pointed out that other accountants with longer experience did not want to talk about the challenges they faced in doing their jobs, for example, struggling with using English language in the ERP system (C1Acc3).

A further example of the poor level of translation of written instructions, when they existed, from English into Arabic was identified in Company 2 by C2MMan7 and C2Acc5. In this case English was used in relation to some computers and Arabic on others. C2MEng4 found it difficult when one computer was in Arabic and another computer was in English. However, the Arabic terminology that was used in the ERP system did not make any sense. For example, the translated word used to refresh the page was understood as an operation at a hospital when the heart has stopped (C2MMan7).

This was a problem because, as C2MMan6 indicated, staff *had* to use the two different computer systems. The first system was to contact staff inside the company and the other was to contact people outside the company. Employees found it difficult to switch from one system to the other system, because an employee had to restart the computer in order to login to the other system.

Thus it is apparent that, in the context of my study, language represents an obstacle to change. I would suggest that this finding might also be present in similar studies conducted in other developing countries. C1MAcc1 and C1Acc3 at Company 1 found it difficult to use the ERP system in English. However, at Company 2 employees found it difficult to use the ERP system in Arabic, because the translation was inaccurate and there were some computers in English and others in Arabic.

#### **8.4.4. Discussion of the influence of technical issues**

The literature review in Chapter 3 showed that 75% of organisational change efforts involving technology fail as a result of people's negative reactions to changes in their work practices, organisational business processes and in the use of the technology leading people to resist the change (Foster, Hawking and Zhu, 2009).

I examined this issue by asking the question: ‘What positives and negatives does the new system have in your job?’. I included habits, social aspects and intentional behaviour in the investigation of reasons which influence the change. This may highlight the hidden causes which make people resist change within the context of a particular job. It is relevant because social aspects have an important influence on the action of employees in Saudi Arabia and, perhaps, other similar countries. Therefore, it is important to include, to explain the acceptance of, or resistance to, an ERP system.

The 1<sup>st</sup> empirical work showed that the advantages of the ERP system facilitate change. The disadvantages of the ERP system delay the change. However, it is interesting that some of the disadvantages of the ERP system facilitate the use of the ERP system.

In the 2<sup>nd</sup> empirical work, I gathered more evidence on the role of the behaviour of employees in explaining the influence of the disadvantages of the ERP system, the power of the senior management and use of the ERP system. The finding is consistent with the results of the 1<sup>st</sup> empirical work as mentioned above. The results indicate that the employees feel safe when they use the ERP system, even if the employees do not trust it.

I collected evidence that helped change. One of these factors is the staff’s previous experience with information technology. It appeared that there are some factors which delay the change, such as the high cost of the ERP system, which was the cause of decline in the number of staff who were been trained.

## **8.5.Organisational factors**

### **8.5.1. The influence of organisational factors on the success of change**

Schein (1990) indicated that without the concept of culture we cannot truly understand successful change or resistance to change. He indicated that there is a clear need to understand how organisational culture influences many activities in organisations such as training, the design of reward systems and the design and description of jobs. He further suggests that it is probable that many organisational change projects failed because they ignored cultural forces.

Empirical evidence shows that, in Company 2, some employees are closer to each other and get used to helping each other. However, others tend not to help others for different reasons, which have been discussed above. When investigating the influence of social culture on the behaviour of employees, it was found that there were many explanations for the likely cause of the behaviour of an employee, and that some of these were linked to organisational initiatives including the provision of a collective breakfast, the creation of inter employee ties, and the nature of authority. I will now discuss these.

#### **8.5.1.1. Collective breakfast**

The company uses many strategies to encourage closeness and camaraderie between employees; for example, Company 2 operates a collective breakfast for the staff once a month. In doing this, the company seeks to motivate employees to develop the desirable system of work.

Nonetheless there are other causes for staff meeting with each other. C2Acc24 did not refer to the breakfast that was organised by the company, but he said that the

staff organised a daily breakfast on their own and they met two or three times a week outside of working hours. C2Acc24 indicated that the cause was due to the work environment and the nature of the staff. However, with the answer of C2Acc24 there is a cultural factor as well. Social culture influences the behaviour of people, for example when somebody is ill is it expected that others will call him. C2Acc24 said that there was an old man in his neighbourhood who was ill and was not able to go to the Mosque for a week. The older man was cross and upset with C2Acc24 because C2Acc24 did not ask about the old man during his absence. Therefore, culture influence the behaviour of employee on that if an employee has difficulty with ERP systems, it is expected that other employees will participate to solve that problem.

#### **8.5.1.2. Trust and relationships**

C1MAcc1 said that people in the Arab world rely on trust between their people. This situation suggests that, with a sense of trust in place, people can motivate each other to change. It was indicated in the 1<sup>st</sup> empirical work that the relationship between staff influences resistance, but also the relationship between staff influences acceptance of change. Observational evidence, for example when I saw employees helping each other and exchanging notes in Company 2, demonstrated that employees influence other employees to use the ERP system and support them by exchanging information in the way described. This finding supports Masquefa (2008), in that the nature of workplace relationships influence the acceptance of, or resistance to, an ERP system.

Another factor is altruism, which makes an employee help other employees and my study revealed a number of examples in this regard. C2Acc24 gave an example; two employees applied for a vacation at the same time; the manager did not accept that at first but then did so when a third employee agreed to do the job of the two employees.

Company 2 appeared to try to help employees to change by training a group of employees in order to provide solutions to the problems faced by employees. C2Acc11 said that some accountants had problems with doing 100 journal entries. It took three days to do the job, so the company provided an Excel model that helped them to do the job in few hours.

C2Acc11 also said that he provided two seminars in different subsidiaries in Saudi Arabia for three years and, as a result, there was a good reaction from the staff to the ERP system. C2Acc24 and C2Acc15 recognize that helping each other was a positive thing because others would then help them. C2Acc24 indicated that there was strong cooperation between staff.

C2Eng3 said that staff needed one another so much that they helped one another. Also, staff learned far more from their colleagues than they did from the formal training. C2MEng4 said that three people were trained, and then they trained their colleagues. He also said the employees, before they enter the session, have in mind that they will ask their friends if they have a problem and that, in the case of having a technical problem himself, he asks his colleagues. He did not ask the official technical support staff, because his colleagues gave him the “bottom line”, i.e. they provided the practical help to solve his problem, and the technical support did not know anything about the process of their work (C2MEng4).

This finding is different from the 1<sup>st</sup> empirical work where employees from Company 1 did not cooperate with one another. This does not necessarily mean that those employees were naturally/culturally unhelpful and did not want to help others, but that the context of the political influences in Saudi, such as Sponsorship system, Saudization and training students, influenced their behaviour and they became more

independent of each other. When asked about this again, during the 2<sup>nd</sup> empirical work, C1MAcc1 still said that the staff are used to being independent, with each person doing and knowing their job, and that it was safer for them that way given the influences noted above.

C1MAcc1 used an Arabic proverb to support his view of not teaching others:

“I taught him archery every day, and when he got good at it, he threw an arrow at me.”

The contrast between behaviours in the two companies is clear, in Company 2, employees tried to decrease the ambiguity of the use of the ERP system because they wanted others to help them, while in Company 1 ambiguity was preferable. The reasons, as indicated earlier, are located in the socio-cultural contexts of the employees in the two different companies. Those employees in Company 1, as foreigners, were trying to keep their jobs, while those in Company 2, all being Saudis were much more comfortable with sharing information to resolve job related problems.

### **8.5.1.3. Lack of recognition of authority**

C2Acc24 indicated that they were not happy about the existing culture of the organisation, and they believed that the ERP system would bring justice to work. C2Acc16, with 14 years of experience, contacted a manager in a different department by phone with a request, but found that the manager did not respond, because the manager would not accept orders from an employee by phone. The manager would only action the request if another manager contacted him. Therefore, C2Acc16 used the ERP system to make the request as, the manager could not refuse a request lodged in that way because it is official and stored on the ERP system. Thus the system could give C2Acc16 the power he needed to do his job. Another example is of the usefulness of



ERP can be seen when considering staff who do not respond appropriately to the request of a colleague. My evidence suggested that some employees would not respond to the phone unless the colleagues trying to contact them were “in” the same “group”. After the implementation of ERP, such employees cannot ignore a request because the request is recorded on the computer and can be seen by the manager (C2MEng1).

This is an important finding because it explains how the current culture of the organisation can influence acceptance of change, somewhat paradoxically perhaps, in a positive way, because the ERP system gives employees some power to request information from managers.

### **8.5.2. Discussion of the influence of Organisational Culture to change**

The above shows many factors within Company 2 which influenced the behaviour of employees leading them to accept the ERP system. These are: collective breakfast, altruism, trust and relationships between staff, and lack of recognition of authority. All of these factors facilitate change to an ERP system. More importantly, those factors influence the behaviour of employees and showed how the behaviour of some employees influence others to accept the ERP system. Therefore, the behaviour of employees is important to explain how these factors influence change, instead of assuming that those factors per se influence the acceptance of the ERP system.

Elsewhere, studies have explained the influence of a factor on accepting the use of the ERP system. For example Sharma, Lawrence and Alan (2010) found that the ambiguity of the information that is provided by ERP systems opens an opportunity for the change agent to effect change. Sharma, Lawrence and Alan (2010) indicate that ambiguity influences employees to change, become closer to one another and thus help

one another. Another study by Busco, Riccaboni and Scapens (2006) points out that people often help one another in crisis situations.

However, the findings from my two case companies suggest that employees react differently to the implementation of the ERP system in accordance with their circumstances. It is my contention that there are a number of reasons for this, economics is one; Company 1 is private and Company 2 is publically owned. This means that the nature of the situations affecting employees is different in each, Company 1 employing mostly foreigners and Company 2 employing mostly Saudis.

In Company 2 ambiguity in the information that is provided by the ERP system encouraged staff to help each other. However in Company 1 ambiguity did not encourage staff to help each other, because they work individually in order to keep their jobs. It appears that ambiguity helps employees to keep their jobs, because, in using an ERP system, it can be used to make it difficult for other people to do other's jobs, and that was the case in Company 1.

Therefore, ambiguity could only open an opportunity to change. However, it is likely that what counts is the influence of ambiguity on the behaviour of the employee. This influence can explain much of the behaviour of an employee in the implementation of the ERP system. Some studies suggest that psychology could help:

“Part of the solution is to bring psychology back into the picture. But strangely this is absent from much of social theory. There is very little psychology in Marxism, partly because the subject was so underdeveloped during Marx's time.” (Hodgson, 2007, p. 101)

I am not a psychologist so I felt that I could not do a psychological analysis per se, but I started my analysis by focusing on the individual and the factors that influence their behaviours and actions. That approach is, in itself, distinctive in the context of

work in the area of change in management accounting and can thus be said to represent a contribution to the field. I used a case study to have a deep understanding of the issue of change and tried to use more than one source of evidence to have a broader view of the change and employees reactions to it.

The importance of comparing the findings from the literature and my empirical evidence indicates that ambiguity is not the driver of change per se, but that the repeated behaviour patterns of employees actually influence the acceptance of, or resistance to, an ERP system. So, in Company 1, foreign employees found ambiguity useful because, in combination with their approach of not sharing information, it made it difficult for others to do their job. In Company 2, ambiguities made people help one another to overcome the difficulties.

It seems that without a focus on the behaviour of employees, it could be difficult to explain the impact of ambiguity of an ERP system on the change because of the response of ambiguity for Saudis is different than for foreigners.

My findings show that the behaviour of employees is important for the interpretation of the acceptance of, or resistance to, an ERP system. Results showed that besides the influence of religion and social culture, a company can influence the behaviour of employees with, for example, the provision of a collective breakfast. In the case of Company 2, that provision led the employees to organise their own collective breakfasts too.

### **8.5.3. The influence of organisational factors on resistance**

#### **8.5.3.1. Evaluation system**

C2Acc7 indicated that the company did not treat employees properly, stating that the evaluation system in the company, which was applied to all employees, did not encourage staff to work harder. For example, he told me that the head of the department did not evaluate employees according to their effort. Instead in accordance with instructions from senior management, employees had to be grouped into categories such as excellent, satisfactory and poor. However, arguably unfairly, there was a quota system for each category whereby the manager had to mark a total of 25% of employees as excellent, 60% as satisfactory and 15% as having poor performance. Thus, the manager divides staff into groups on the basis of those percentages, and not on the basis of individual employee effort, or even, sometimes their quality of work. In this context, the evaluation of the individual employee depends on the work quality of the rest of the staff in his department, i.e. whether or not the 'team' achieves the targets set by their managers. In such a context, if the employee works very hard, he might only be counted as equal to another employee in a different department who did not work as hard as he did. So he decided to be less active.

C2Acc7 (who has many awards as the ideal employee in his department and as an ideal employee in the company of the year) stated there were other hardworking employees who had been evaluated only as 'satisfactory'. As a result, that employee had begun to limit his effort because he realised there was no benefit in working hard and diligently because the evaluation often did not reflect the quality of work and it was not tied to promotion (C2Acc7).

C2Acc15 said that the ERP system brought justice: in the past the manager did not fairly assess employees, but now the manager can use the ERP system to assess the amount and quality of work undertaken by an employee. Thus, as C2Acc19 said, some employees use the ERP system as they know the contribution of their work can be recognized.

The above finding is not, perhaps a shock. However, I also found that the encouragement of managers to employees may represent an obstacle to change. C2Acc15 explained that one employee was collaborating with his colleagues and giving them considerable help, as a result the manager planned to encourage him by giving him a promotion according to his skills of using the ERP system. However the result was the opposite. The employee now helps his friends in his department less, because he does not want anyone to learn so they can compete with him, but he still helps others outside his department because their performance cannot compromise his rewards (C2Acc15).

C2MCM2 depends on the head of the department to direct staff. The circumstances and results of employees helping others is one of the important findings of this study, in that they highlight unintentional resistance or lack of success of the new system. The motivational approach of the manager could lead an employee to resist helping with the new system; therefore, managers should think about the result of the method that they use to motivate employees.

### **8.5.3.2. Company only concerned with financial matters**

The 1<sup>st</sup> empirical work showed that Company 1 was only interested in financial matters. Therefore, in the 2<sup>nd</sup> empirical work I aimed to gather more evidence about the impact of the actions of senior management on the behaviour of their staff.

When I investigated why there was only interest in financial matters, I found that the senior management play an important part. C1FM1 said the senior management only focus on the financial reports. C1MAcc1, who is engaged in financial matters, was happy about this situation but other employees were not pleased about that focus because it made them feel their work was undervalued and thus they resisted the system (C1FM1; C1Acc3; C1MAcc2).

The behaviour of employees is influenced by the decisions of senior management. Employees, who are not involved, for example in the financial settlements aspect of work resist ERP because they feel that they have no power. That resistance included a manager, C1FM1, who clearly felt that his position was being weakened by the system of work and the priorities in place.

### **8.5.3.3. Formal and informal power**

As seen in Chapter 7, the 1<sup>st</sup> empirical work showed that one of the barriers to change was the absence of job descriptions. We also saw in Chapter 7 that C1FM1 used his informal power to encourage employees to resist helping senior managers to build a 'bank' of their jobs descriptions. The informal power represent an important factors for the ability of C1FM1 to influence employees in accepting or resisting change. Therefore, I aimed in the 2<sup>nd</sup> empirical work to further investigate the causes of the failure of the job description project.

In 2010 C1FM1 told me that senior management had tried to implement a job description project, but that he had refused to enact it and sent unofficial signals to employees to ignore it. It appeared to C1FM1 that the job description project would give a clear view of the responsibility of staff to senior management, but their having

that better information would limit his power, hence he resisted the request to gather the job descriptions of his staff.

One year later, in 2011, during the 2<sup>nd</sup> empirical work, I asked C1FM1 again about the barriers to successful implementation of the ERP system. However, in talking about the job description project again, his answer was different from that of the previous year. C1FM1 now claimed that he tried to do the job descriptions, but that senior management refused to help him to do so. C1FM1 had clearly forgotten what he had told me in 2010.

The 1<sup>st</sup> empirical work suggested that the behaviour of C1FM1 was the main factor for resistance to an ERP in his area of work. The job descriptions of his staff would have affected the power of C1FM1. C1FM1 was essentially sabotaging the request of the company owners as well as undermining those for whom he was responsible by not telling the owners the quality of their contribution to the company.

I tried to explore through discussion with C1FM1, C1MAcc1 and C1MAcc2 the causes of the behaviour of C1FM1 and found he had a limited role, and he had no real power within the company. My evidence causes me to believe that C1FM1 understood that the job description project would give the senior management a clear view of the tasks of employees, and that such a view would affect his position given that he wanted to keep his position as a moderator between employees and senior management. I also found that formal and informal rules played an important part in the (non-) implementation of the job description project and that by applying what he felt to be his authority in an informal manner with his staff, he and they - without them realising it - could resist senior management and protect his role.

Undertaking the job descriptions project was inconsistent with the desires of C1FM1, thus he used his power to make the project fail. Being able to make this comparison between the findings of the 1<sup>st</sup> empirical work (2010) and 2<sup>nd</sup> empirical work is important because it helps in demonstrating an element of the complexity of qualitative case study research and the need for any researcher to maintain accurate and accessible records. Doing so in this case means that I have been able to show how participants might 're-write history'. In 2010, C1FM1 admitted that he made the job descriptions fail. However, in 2011 he blamed the senior management for that failure. Therefore, the informal power exercised by C1FM1 represents an important factor in the contexts for resistance.

#### **8.5.3.4. Senior management and resistance to change**

Although, as I have shown, the behaviour of an employee is influenced by many factors inside and outside the organisation, senior management plays an important role in shaping the culture of the organisation in Company 1. The following evidence, will show that there is lack of engagement of senior management on change. For example, using technician support, training courses and development of the work, shows some negative behaviour of employees towards the implementation of the ERP system in Company1.

I observed that senior management did not agree to develop the work as it would be done using ERP. The culture of Company 1 suggested that management were not interested in developing the nature of work in general, so staff did not care about development. C1FM1 said the employees did not want to develop; for example, C1FM1 indicated that he suggested that employees should organise incoming and outgoing



work on their desk, therefore C1FM1 will know the amount of work that staff spend but the staff refused. It seems that staff did not want others to interfere with their work.

In regard to the support in place for the change to ERP, C1MAcc2 said the benefit to be gained from the technical support was only 20%, because the employees did not want to tell the technical support about the problems they faced, the reason for that being that employees feel that their job is secure. That is because the company cannot afford to replace them, since they are doing extra work that is not covered by the capabilities or use of the ERP system. For example, C1MAcc2 explained that the data on the ERP system shows some errors in the depreciation of machinery. Rather than notifying the technical support about the problem, C1MAcc2 re-calculated the depreciation and inserted the new figure to the system manually (C1MAcc2). The success of the ERP implementation needs cooperation between the accountant and technician to adjust the ERP system, but examples of behaviour such as above demonstrate resistance to that. This supports the work by Shad, Chen and Azeem (2012) who found that employees did not share information with their colleagues, because they faced the threat of losing their job from senior management and their peers.

Employees were aware that they needed training, but they did not request it as they prefer to learn by themselves and prove they can do the job (C1MAcc2). C1MAcc1 extended an explanation in this context by pointing out that the company provided an opportunity for training, but employees did not ask for it because they viewed it as a sign of weakness and believed that their managers did so too.

Therefore, the managers needed to reduce the power distance with employees to encourage employees to speak. Just as Sharma et al. (2010) argued that social culture plays an important role, for example when employees keep silent in formal meetings as

a sign of respect for the manager, my thesis found that social culture and the power of senior management can play important role in the implementation. If employees in Saudi Arabia do not resist the new system that does not mean they are in agreement, or will engage with the system. Indeed, as my evidence suggests, they might give the appearance of working with the system while not actually doing so, thus resisting it in a range of both subtle and unsubtle ways.

Management structure and managerial behaviours have an impact on the organisational culture. One of the main notions associated with organisational culture is that it is influenced by internal factors. However, in the context of Company 1 – privately owned - the owner has absolute freedom in managing the company, according to his desires. Thus, it may be that what gives the owner his level of power is related to external factors; for example, economic and political factors such as employees not having the freedom to move to another company. Therefore, in presenting the level, degree and nature of resistance towards ERP within Company 1, my thesis demonstrates that people are perhaps no longer prepared to just go along with what the owner wants and tries to enforce. They might not be ready (ever) to engage in outright revolution, but they are becoming more willing and able to resist the will of the owner. Given the issue of the national context of autocracy (as discussed in Chapter 2), this finding is a potentially very important aspect of my thesis.

My research suggests that one of the outcomes of the autocratic management style of a company's owner can influence the behaviour of employees. Those employees, for instance, become less involved in development and only focus on doing their job. Furthermore, as my evidence shows, they do this on their own terms. As a result, a development or innovation is less likely to achieve the benefits that the owner might expect.

Ansari and Bell (2009), found that a major problem facing the implementation of ERP is that senior management do not appreciate the effort of employees to improve the work, therefore employees do not have an interest in improving the work. Previous research tells us that there is a need to study the needs of the users and causes of resistance in order to introduce ERP systems successfully (Aladwani, 2001). That situation contrasts strongly with the situation found in Company 1 where C1FM1 currently works and where it was clear that staff, and he too, felt disengaged.

When I investigated this lack of interest of employees in development in general, it appeared that the organisational culture of the company has a direct influence on the behaviour of employees in this regard. C1FM1 told me about what had happened in his previous employment, in a bank, where employees were invited to comment on issues of development every month. Employers were then able to use some of the comments and suggestions as a means of making changes and improvements to the system of work.

My interpretation is not so much that employees are resisting change. They are actually ignoring and avoiding it; it is incredible that senior management either do not know this or are happy to ignore it. If either of these is the case, the employees do not need to be worried about their jobs at all.

#### **8.5.3.5. Long period of implementing ERP**

C2Acc7 reported that the company suddenly applied ERP but provided only minimal training. The employee told me that he was shocked and depressed with this approach to so fundamental a change (C2Acc7). In this section I will discuss how the implementation of the ERP process can be limiting for the system. It appears that C2MCM2, as the manager responsible for the introduction of the new system, expected

employees would just use the ERP system and that there was no need to give them time to become familiar with it.

My evidence demonstrates that there was not enough time between training and implementation for Company 2 employees. They merely received two weeks of training before the system was implemented (C2Eng2). C2Eng3 stated he trained for just two days before the implementation of the ERP system. C2Eng3 asked for more training time, but his manager said that “it is enough to train some employees”. C2Eng2 stated there was no parallel system<sup>23</sup>, and explained that the parallel system was usually used during a transition period between the old and new systems. However, the parallel system was applied only in certain subsidiaries of Company 2. This finding indicates managements’ lack of regard for employees in terms of the introduction of ERP, and perhaps a lack of understanding of the importance of employees to the effective and successful introduction of a new system. Clearly, the length of the introductory phase of the ERP system is an obstacle to change. While my participants did not state explicitly that management behaviour in the introduction of ERP caused them to behave negatively, it could be argued that such behaviour would not warm employees to the introduction of ERP.

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<sup>23</sup> This was where the old and new systems work together in case of failure or mistakes with the new system.

### **8.5.3.6. Routine of doing the work**

There is some evidence which shows that employees get used to doing their job in particular ways using the pre-ERP system. It is one piece of evidence that supports Burns and Scapens' (2000) framework.

C2Acc20 said that one of the employees did not want to use the ERP, because he was used to the older system, so the manager moved him to different job that did not require him to use the ERP system. C2Com2 and C2Acc24 indicated that their managers get used to the old system, however the ERP system provided data in a different format to the old system. Therefore, managers ask employees to reorganise the data to be as it was prior to the intro of ERP.

However, C2MMan2 stated that the new routines that annoyed them at first did not determine their reaction to the change. C2MMan2 has 30 years experience, and he wanted to use the ERP system and has the certificate of Super User, but he suffers from his past experience. He says that even now he remembers the way the old system worked, which makes him confused when using the ERP system. This is an excellent example, explaining the barriers that face employees who are influenced by habit.

### **8.5.4. Discussion the influence of Organisational Culture to resist**

The results of the interviews showed that a number of factors within the company affect the behaviour of employees and delay the successful implementation of an ERP system. These are: the evaluation system; the motivation system; senior management being concerned primarily with financial matters; formal and informal power; senior management not supporting the change; the routine of doing the work, and the length of period of implementing ERP.

Company policy affects the behaviour of employees. The owners of Company 1 were highly interested in financial matters, but not in other departments such as stores. Therefore employees involved with stores felt that their work was unimportant, so employees had little interest in company developments.

This result is consistent with Watson (2006) who argued that formal and informal versions of an organisation include change. The formal version of Company 1 showed that the financial matters were important to managers in Company 1, therefore employees focused on financial matters and ignored the other departments. Whereas the informal versions of Company 1 showed that political and economic influences affect foreign employees, therefore, employees tended not to share information with other employees, for example, “organisational members follow a rule of never sharing information with people from outside their own department” (Watson, 2006, p. 260). In the case of my research, in Company 1, employees did not even share information with colleagues in the SAME department. That finding is important because it demonstrates the value of considering models/theories that purport to be capable of application in all contexts, including those that are completely different from the ones in which they have been developed. This, I would argue, is the case when considering the applicability of a theory developed in the West, but being applied in a Middle Eastern country such as Saudi Arabia. Thus, my study shows that the Burns and Scapens framework is not readily applicable in the Saudi context and nor is Watson’s framework or theory.

In the context of Saudi Arabia, there are many groups of employees regarding their nationality, religion, city of residence and accent. Moreover, politics can create classifications between employees since the government for example, issued different policies for foreign employees such as the Sponsorship system and Saudization (See Chapter 2). Therefore, foreign employees may not cooperate with other employees.

Moreover, social culture and religion can influence employees to cooperate with each other which facilitates the success of the implementation of ERP systems. For example, the Quran influences Muslims to help each other. However, even that is not straight forward as was seen in the discussion above concerning Shia Muslims.

The findings are consistent with previous studies, e.g. Ansari and Bell (2009) found that a major problem which faces the implementation of ERP is a feeling of lack of appreciation from the staff. This is likely to influence the action of an employee. For example, an employee may not help in the development of the ERP system because their opinion is not appreciated by their senior management.

In the context of Company 2, another negative impact to the company's policy, for example, is that managers could not fire certain employees because of the government's policy on the employment of Saudi citizens, some of whom are not interested in working. Therefore, managers nominated unqualified and uninterested employees to be trained as experts in the ERP system in order to remove those employees from their position during training, and then ignored when they returned to the department.

The finding is consistent with previous studies, e.g. Idris (2007) found that firing Saudis for poor performance rarely occurred. Therefore the Saudi employee's performance may be lower than that of a non-Saudi employee, and yet the non-Saudi's job is under more threat.

In Company 2, the culture of the company is one obstacle to change. The culture of the company directly affects the behaviour of employees. Employees used to feed information into the system on a monthly basis, but the ERP system required information on a daily basis. After the implementation of the ERP system some staff did

not enter information on a daily basis, thus causing inaccurate information about the activity of the company and the usefulness of the information became limited.

The evidence of the above example is consistent with Burns and Scapens' (2000) findings, where employees who are used to the old way of working resist the ERP system. Unfortunately Burns and Scapens' (2000) framework does not give enough explanation of other factors that affect employees and therefore engender different results. For example, C2MMan2 who has 30 years of experience in Company 2 did not resist the ERP system, and he took courses and became an expert in the ERP system.

One of the contributions of my research is that attitudes towards motivational techniques can be an obstacle to change. In the example presented in Section 8.5.3.1. above, the notion of the 'motivation paradox' explained how one employee stopped helping his colleagues after the manager told him that he was to be promoted. The employee felt worried that his direct colleagues would be able to compete with him on the basis of the added information he was giving them. Nonetheless the same employee continued to teach other colleagues in different departments. This example shows that the manager did not take into account the impact of his decision on the behaviour of his direct colleagues; and yet it can be appreciated why, under the circumstances, why he would withhold his expertise from his direct colleagues.

There is evidence in Company 1 which indicates that the change agent, as expected, plays an important role in the change, but not necessarily in the intended way. As seen in Section 8.5.3.3. 'Formal and informal power' above, C1FM1 exploited the behaviour of employees to make employees use the ERP system and resist the job descriptions project. Therefore the change agent plays an important role in explaining



the acceptance of, or resistance to, an ERP system, but not necessarily in the expected way.

The evidence above is consistent with that of previous studies, e.g., French and Raven (1959) showed that formal and personal power are important and different power types may be used in different situations. In my thesis I investigated how managers used their power to influence change to the ERP system. However, in both Company 1 and Company 2, my thesis explores the factors that influence managers to change or resist an ERP system, such as political influences as discussed in the first empirical work in Chapter 7.

Some studies also found the relationship between members of the company has a role in the change process (Masquefa, 2008; Agourram, 2009; and Sharma, Lawrence and Lowe, 2010). Masquefa (2008) finds that during the change process, trust and relationships between members can be fundamental to reduce uncertainty and can facilitate the introduction of a new system. Agourram (2009) found that the influence of managers played an important part for the success of ERP at a public university in Saudi Arabia. Sharma, Lawrence and Lowe (2010) found Institutional Entrepreneurs act as internal change agents in the company.

The results of my interviews showed that there are many factors within the two case study companies which directly affect the behaviour of employees and indirectly influence their resistance to an ERP system. Furthermore, the results of that behaviour can be both positive and negative; i.e., what is positive in what context can be negative in another. For example some managers wanted to upgrade an employee who helped others, but the employee became less active because others may have been in position to compete with him if he continued to train them. Therefore, managers should take into

account the behaviour and personality of employees before motivating employees in a particular way. This finding is consistent with the work of the motivational psychologist, Victor Vroom (1964), whose Expectancy Theory of Motivation, posited, in essence, that different factors motivate different people differently, depending on what they are drawn towards and the extent to which they anticipate achieving it (Lunenburg, 2011). In the context of Saudi Arabia, it would be difficult to make such a recommendation because of the autocratic nature of the country, a nature which is replicated in organisations, perhaps particularly privately owned ones.

## **8.6. Conclusion**

This chapter presented my 2<sup>nd</sup> empirical work as conducted in Companies 1 and 2. The 1<sup>st</sup> empirical work helped to set the primary focus of my thesis, i.e. that the focus is not only on the causes of acceptance of, or resistance to, an ERP system, but on *how* these causes affect the behaviour of employees and how the behaviour of employees influences acceptance of, or resistance to, an ERP system. According to the results and the discussion of the 1<sup>st</sup> empirical work, I re-formulated my research questions to take the following shape:

(i) What is the importance of employee agency, and what personal and environmental influences are there, in effecting the implementation of a new ERP system?

(ii) How do individual agents bring about institutional change?

The section summarizes the findings and shows that many factors interact with each other and influence both the acceptance of, or resistance to, an ERP system.

### 8.6.1. Factors affecting acceptance of, or resistance to, an ERP system

The 1<sup>st</sup> empirical work (See Table 7.2 in Chapter 7) showed external factors that influenced the behaviour of employees, including: politics, economics, religion and social culture and the culture of the organisation.

In the 2<sup>nd</sup> empirical work interviewees mentioned no new evidence of the influence of politics and economics on the behaviour of employees. In the 2<sup>nd</sup> empirical work the behaviour of employees are influenced by social culture and religion and the culture of the organisation. It appears that technical issues do not influence the behaviour of employees, but only open an opportunity for acceptance of, or resistance to, an ERP system. The finding of the 2<sup>nd</sup> empirical work shown in Table 8.1 below.

**Table 8.1 Summary of the factors from the 2<sup>nd</sup> empirical work**

	Factors influencing reactions to change	Factors influencing resistance
Religion and social culture	Religion and social culture Cooperation between employees Social gatherings for employees	Influences of Shia Muslim Not to criticise others Family influences on accepting ERP Employees are not used to reading Influences of weather on attitudes
Technical issues	Errors of ERP Positive experience with IT	Cost of ERP Cost of authorisation to access ERP Ambiguity of ERP Inflexibility and mistakes of ERP system Translation of English language
Organisational culture	Collective breakfast Trust and relationships Lack of recognition of authority	Evaluation system Senior management only concerned with Financial matters Formal and informal power Senior management does not support the change Long period of implementing ERP Routine of doing the work

Source: Summary of the findings

Evidence suggests that the behaviour of individuals in the two companies is not only subject to orders of the manager within the company, but it is affected by many external and internal aspects. The 2<sup>nd</sup> empirical work showed most of the evidence discussed with employees in both companies in Sections ‘8.2. Religion and social culture’ and ‘8.4. Organisational factors’. In addition to the 1<sup>st</sup> empirical work, the 2<sup>nd</sup> empirical work identified new issues including, in Section ‘8.4., Technical factors’. The following summarizes the findings from the 2<sup>nd</sup> empirical work.

### **8.6.2. Summarizing the findings of the 2<sup>nd</sup> Empirical work**

In Chapter 4: Theoretical Framework, I explained Burns and Scapens’ (2000) framework and how institutions affect the behaviour of individuals by rules of managers and routines and actions of employees. However, after my 1<sup>st</sup> empirical work it was clear to me that there was a difference between the notion of routine as used by Burns and Scapens in their framework and the routines which were indicated by interviewees.

Burns and Scapens (2000) focus on routines that are influenced by formal rules, but ignore other external and internal factors that influence the behaviour of employees. It is clear from my research that a shortcoming in the framework of Burns and Scapens is in the definition of rules and routine. However, the framework remains useful in its role as providing an initial explanation on how rules and routines might influence the behaviour of employees.

Behaviour becomes institutionalised in the long run, as Burns and Scapens explained in their framework. Burns and Scapens’ (2000) framework is thus important because it explains how the institutionalised way of thinking influences the action of employees through rules and routines.

Moreover Burns and Scapens' (2000) framework becomes more important in explaining the acceptance of, or resistance to, an ERP system, because the action of employees is influenced by rules, routines or institutionalised behaviour. When the rules do not exist or have no direct relationship on the action of employees, then institutionalised behaviour can influence the action of employees through routines. For example, there is no relationship between the influences of religion on the acceptance or rejection of an ERP system, but religion nevertheless impacts upon the behaviour of employees. Thus the institutionalised behaviour could be the only way to understand the factors that influence the acceptance of, or resistance to, an ERP system. My deconstruction of Burns and Scapens' (2000) framework could be seen as one of the most important contributions of my thesis since it has allowed me to extend beyond that framework to explain the indirect relationship between external and internal factors to the acceptance of, or resistance to, an ERP system.

My two main contributions are important to this field of work. First, the rules and routines that should be focused on are not defined in the work of Burns and Scapens' (2000) Framework. Rather, it is my argument that the focus should be on the behaviour of employees which develops, is repeated and is continuously influenced by both external and internal factors.

The second main contribution is that my evidence suggests that the behaviour of employees can affect both change and resistance as indicated by Becker (2005a). Again, my findings are different from those suggested by the highly influential Burns and Scapens' (2000) framework, in that routines influence resistance. However, only a few interviewees (C2Acc24; C2Com2; C2MCM2) indicated that the routines of following orders of managers have importance to resistance. Therefore, according to my evidence,

the routines and rules as explained in Burns and Scapens' (2000) framework may not have the high level that they attribute to them.

Here are some other important results of my thesis. The ambiguity of ERP did not always make staff become closer to one another, as Sharma, Lawrence and Lowe (2010) indicated. Ambiguity did not make employees work together because of political influences. However, in Company 2 employees became closer to one another not only because of ambiguity but also because of other social culture and religious influences. These could be seen when I included a wider view of the issues and the link between factors that have been increasingly identified in the literature. My thesis addressed the gap that is identified by Nor-Aziah and Scapens (2007) who argued that little is known about the relationship between trust and power, and especially about the role of agency in bringing about or resisting management accounting change. My work has extended knowledge to what is now known in this regard according to my findings.

Previous studies, for example, Busco and Scapens (2006) indicated that the decline in confidence of employees in the use of the ERP system is likely to lead to resistance. However, my results show that the decline in confidence can lead to the use of the system. This is because the employee is sure that the information provided by the ERP system is wrong and illogical. However, at the same time he uses the system in order to protect himself, because he knows that the ERP system is the preferred, indeed the only acceptable, source of information to managers. As a result, even when it is acknowledged to be wrong, the employee cannot be blamed. Because it is known that the system is often wrong, his manager sometimes asks him to bring information from outside of the ERP system.

The actions of the employees in Company 1 were influenced by different factors. For example, the role of the Ministry of Labour treats Saudis and foreigners differently. Therefore, foreign employees try to keep their jobs by any means. The power of the Ministry of Labour influences both change and barriers to change. It influences change by making employees obey orders from senior management. Also it influences barriers to change in that employees do not cooperate with each other and refuse to train other employees. Therefore no one can do their jobs efficiently and effectively, but it is very difficult for senior management to replace them.

My evidence suggests that external factors do not affect the acceptance of, or resistance to, an ERP system directly, but rather indirectly through the behaviour of employees. Employee reaction to external factors was not the same between all employees. Interviews with different employees were useful for the interpretation of the relationship between external factors and resistance.

My evidence suggests that the behaviour of employees is important to explain the interrelationship between factors and the acceptance of, or resistance to, an ERP system. Therefore it is important to consider all other factors that influence employees in order to be able to explain acceptance of, or resistance to, an ERP system. I found that some factors such as ambiguity and distrust for the ERP system could influence not only resistance but could also acceptance of change.

More than one study shows how one factor can influence both the acceptance of, or resistance to, an ERP system. For example, trust and relationships could lead to acceptance of, or resistance to, an ERP system (Masquefa, 2008). Busco, Riccaboni and Scapens (2006) found that behaviour influences (un)learning and change.

The evidence shows that both situations of the acceptance of, or resistance to, an ERP system exist. This suggests that success could be situational and the factors involved include the nature of a particular society. Cultural and religious environments might have an influence, perhaps particularly in a country such as Saudi Arabia which has distinctive labour markets. It is an important finding of my thesis as it demonstrates where differences might lie, even with one country or one industry.

My contribution is that I found a difference between the results of previous studies in Chapter 3 and the results of my study. The main reason for the disagreement is that those studies only focus on a limited number of factors and thus they provide only one side of the explanation of acceptance of, or resistance to, an ERP system. For example Busco, Riccaboni and Scapens (2006) found that little trust in an accounting system leads to resistance, but my evidence shows that it also could lead to acceptance of change because employees use the system to protect themselves against the liability of the senior management.

A lot of research has been done on management accounting change, but most of the studies that use Institutional Theory focus on the management accounting *system*, rather than a wider view of the change which includes employee agency and the factors that influence the actions of the agent. Most of these ‘systems based’ studies, as was indicated earlier in Chapter 3 were focused on the direct relationship between factors and the acceptance of, or resistance to, an ERP system. Although Scapens (1994) calls on researchers to include the socio-cultural context, there has, until now, been little insight into the influence of the socio-culture context. As indicated earlier, Scapens (2006) states there are other factors other than routine that can influence the acceptance of, or resistance to, an ERP system: for example, Busco and Scapens (2006) on trust; Nor-Aziah and Scapens (2007) on trust; Busco et al. (2007) on agency; Sharma et al.



(2010) on agency; Yazdifar et al. (2008) on the need to include power politics and culture.

To understand the relationship between the elements affecting employees in regard to their reaction to changes to their work, such as the ERP system, and their subsequent actions, there is a need to identify the elements or factors that influence their actions (See Summary of the factors in Table 7.2 in Chapter 7 and Table 8.1 in Chapter 8). Also, one must then understand how those actions become absorbed within the routines of work. Using Institutional Theory can help to understand how an action becomes institutionalised through rules and routines. Similarly, it can help to explain intentional and unintentional behaviour of an employee during the implementation of the ERP system.

The evidence shows that the behaviour of employees plays an important role in explaining the acceptance of, or resistance to, an ERP system. Both the 1<sup>st</sup> empirical work and the 2<sup>nd</sup> empirical work showed that routine, as explained by Burns and Scapens (2000), was not a driver for the acceptance of, or resistance to, an ERP system. However, it appeared that the relationship between the rules and routines explained by Burns and Scapens is important to explain the behaviour of employees.

The final Chapter discusses and concludes the findings.

## **Chapter 9: Conclusions**

### **9.1.Introduction**

This chapter concludes my thesis. It provides a summary of the main points in the research process. First, it shows the development of the research question. Second, it summarises the results and the main contributions of my thesis. Third, it states the limitations of my thesis. Finally, it explains the implications of my findings and makes suggestions for future research.

### **9.2. Developing the research question and summary of research findings**

I developed the research question after the 1<sup>st</sup> empirical work which is represented in Figure 5.4 in Chapter 5. Figure 5.4 describes the structure of my thesis. Therefore, it is unnecessary to explain in detail the figure, but it would be useful to provide an outline of that structure to explain why I developed the research question.

I started the investigation with a general question about the changing role and relationships of management accountants, aimed at examining the impact of Information Technology (IT), such as ERP systems, on the role of management accountants. According to Arnold (2006) ERP has been implemented by firms because it is said to improve organisational efficiency, effectiveness, and performance. Many studies (e.g. Scapens and Jazayeri, 2003; Ribeiro, 2003) paid attention to the factors (such as ERP systems) that influence employees' attitudes towards change inside organisations. Also, those studies looked at how ERP systems affect management accounting.

A critically engaged investigation such as mine shows many gaps in the literature. Others have also done this in the same area, most notably Scapens (2006) noted that the Burns and Scapens' (2000) framework required further development and expansion, because a number of post-2000 studies identify different causes of change. Some of the factors that influence change are, for example: trust (Busco, Riccaboni and Scapens, 2006; Nor-Aziah and Scapens, 2007) ; agency (Busco et al., 2007; Sharma, Lawrence and Lowe, 2010); power, politics and social culture (Yazdifar, Zaman, Tsamenyi and Askarany, 2008).

The absence of a full range of causes challenged me, throughout my thesis, to identify the factors that influence acceptance of, or resistance to, an ERP system. Thus, part of the contribution of my thesis is in identifying a wider range of factors that influence the acceptance of, or resistance to, an ERP system.

Previous studies that were discussed in Chapter 3 indicated that there is a need to focus on the role of the agent, or employee, within organisations to explain why employees accept or reject a new system such as ERP (for example: Busco, Riccaboni and Scapens, 2006; Idris, 2007; Masquefa, 2008; Ansari and Bell, 2009; Sharma et al., 2010). Understanding the relationship between these various issues and aspects and the acceptance of, or resistance to, change is neither a straightforward nor an easy task.

Therefore I needed an analytical lens that could provide a conceptual model to explain the acceptance of, or resistance to, an ERP system; in view of its predominance in the field, I chose the Burns and Scapens' (2000) model. Chapter 4 viewed Institutional Theory in general, and Burns and Scapens' perspective on it in particular. Burns and Scapens placed considerable emphasis on routines to explain resistance to new rules within organisations. Viewed through the construct of routines, my initial

question was transformed into the consideration of how routines affect resistance to new ERP systems.

A preliminary research question emerged from the literature review in Chapter 3. My thesis aimed to explore and understand the impact of external and internal factors on employees attitudes towards accepting or resisting ERP systems. More importantly, by conducting and then examining an original case study in Saudi Arabia in which the management accounting system had been changed, my thesis focused on (i) why the change (introduction of ERP) happened, with particular reference to the socio-economic and socio-cultural contexts of Saudi; and (ii) which factors might threaten to compromise change and lead to resistance to such change in management accounting.

However, the research question was modified after the 1<sup>st</sup> empirical work (See Chapters 3 and 7) in order to reflect three important considerations. First, to explore the Saudi business environment as explained in Chapter 2 along with the factors that might influence the acceptance of, or resistance to, an ERP system in some companies there. Second, to examine the influence of routines (if any) on the resistance to an ERP system. Third, to explain how those factors interact with each other.

Chapter 2 explored the economic, political, cultural and religious factors that surround the Saudi Arabian business environment. It illustrated, for example, that the proportion of foreigners in the private sector accounted for 90% of total employment. I decided therefore, that a comparative focus on Saudis and foreigners would provide a better view of the influence of factors on the acceptance of, or resistance to, an ERP system.

I carried out the 1<sup>st</sup> empirical work (discussed in Chapter 7) to evaluate the clarity of the research question. It aimed to explore the factors that influence the

acceptance of, or resistance to, an ERP system, and to discover the interrelationship between those factors. The findings did not support the role of routines in explaining resistance as Burns and Scapens' (2000) work had suggested. However, the results were consistent with the wider literature in that the relationship between factors and the acceptance of, or resistance to, an ERP system is an *interrelationship*, rather than a linear one. For example, employees did not resist the ERP system because of distrust of the ERP system as Busco, Riccaboni and Scapens (2006) had indicated, but rather they used it to protect themselves against any liability in the eyes of senior management.

The findings of the 1<sup>st</sup> empirical work show many factors such as: politics, economics, social culture, religion, culture of the organisation and technical issues. Table 7.2 in Chapter 7 provided a summary of the findings in that regard. Foreign employees in Saudi Arabia are subject to political regulations and are influenced differently than Saudis, therefore they react differently in regard to the ERP system. Also the 1<sup>st</sup> empirical work showed that focus on employees was important to explain the interrelationships between factors and the acceptance of, or resistance to, an ERP system.

Reflecting on these considerations, the research question for the main study was rephrased as follows:

- (i) What is the importance of employee agency, and what personal and environmental influences are there affecting the implementation of a new ERP system?
- (ii) How do individual agents bring about institutional change?

### 9.3. Findings

In this section I will detail the findings to answer the research questions of the 1<sup>st</sup> empirical work and the 2<sup>nd</sup> empirical work, where I explain my findings for the examination of the drivers that influence employee to use the ERP systems. The findings of the 1<sup>st</sup> empirical work and the 2<sup>nd</sup> empirical work shown in Table 9.1 below.

**Table 9.1 Summary of the factors from the 1<sup>st</sup> empirical work and 2<sup>nd</sup> empirical work**

	Factors influencing reactions to change	Factors influencing resistance
Politics	<i>Factors from the 1<sup>st</sup> empirical work:</i> Sponsorship system	<i>Factors from the 1<sup>st</sup> empirical work:</i> Sponsorship system Saudization
Economic	<i>Factors from the 1<sup>st</sup> empirical work:</i> Salaries	<i>Factors from the 1<sup>st</sup> empirical work:</i> Resignation
Religion and social culture	<i>Factors from the 1<sup>st</sup> empirical work:</i> Behaviour of employees  <i>Factors from the 2<sup>nd</sup> empirical work:</i> Social culture and religion Cooperation between employees Social gatherings for employees	<i>Factors from the 1<sup>st</sup> empirical work:</i> Nepotism in employing  <i>Factors from the 2<sup>nd</sup> empirical work:</i> Influences of Shia Muslim Not to criticise others Family influences on accepting ERP Employees are not used to reading Influences of weather on attitudes
Organisational culture	<i>Factors from the 1<sup>st</sup> empirical work:</i> Relationship between staff Individual learning Influences of C1FM1 to buy ERP system Regulating of training  <i>Factors from the 2<sup>nd</sup> empirical work:</i> Collective breakfast Trust and relationships Lack of recognition of authority	<i>Factors from the 1<sup>st</sup> empirical work:</i> Relationship between staff Lack of support by other department Older employees resist ERP system Employees avoid learning Functional structure Employees tend to work individually Influence of the Board of Directors  <i>Factors from the 2<sup>nd</sup> empirical work:</i> Evaluation system Senior management only concerned with financial matters Formal and informal power Senior management does not support the change Long period of implementing ERP Routine of doing the work
Technical issues	<i>Factors from the 1<sup>st</sup> empirical work:</i> Advantages of ERP system  <i>Factors from the 2<sup>nd</sup> empirical work:</i> Errors of ERP Positive experience with IT	<i>Factors from the 1<sup>st</sup> empirical work:</i> Difficulty in implementing ERP system Inflexibility and mistakes of ERP system Lack of training  <i>Factors from the 2<sup>nd</sup> empirical work:</i> Cost of ERP Cost of authorisation to access ERP Ambiguity of ERP Inflexibility and mistakes of ERP system Translation of English language

Source: Summary of the findings

My analysis of my 1<sup>st</sup> empirical work suggested that discussion of the factors could be organised into three levels of themes, because those factors do not have a linear relationship regarding the acceptance of or resistance of the ERP system. The 1<sup>st</sup> level theme identifies the factors that influence employees to accept or resist the ERP system. However, those factors are interrelated and therefore there is a need for a 2<sup>nd</sup> level theme to show how external and internal factors influence the behaviour of employees. In addition the 3<sup>rd</sup> level theme shows how the behaviour of employees influences their acceptance of, or resistance to, the ERP system. I will discuss these three levels in sections 9.3.1, 2 and 3 below.

### **9.3.1. 1<sup>st</sup> level**

The first-level themes aimed to identify the external factors such as politics, economics, social culture and religion; and internal factors such as the culture of the organisation and technical issues. I identified those factors in two stages, the 1<sup>st</sup> empirical work (Chapter 7) and the 2<sup>nd</sup> empirical work (Chapter 8). Table 9.1 above summarises those factors.

I found that the technical issues of ERP systems influence some employees to accept an ERP system because they were seen as leading to advantages in using the system, and positive experiences with IT. However, some employees found it difficult to use the ERP system, because of its inflexibility, the mistakes within the system, and a lack of training to use the system properly. However, the external and internal factors per se do not explain the relationship between the acceptance of, or resistance to, an ERP system, since the impact of these factors could be different from Saudi employees to foreign employees.

In addition, there are factors such as the sponsorship system and Saudization which indirectly affected the acceptance of, or resistance to, an ERP system. For example, foreign employees in Company 1 did not advise others in the use of the ERP system, because ambiguity and the difficulty of using the ERP system helped them to make the job difficult for others and, as a result, helped them to retain their own job in the face of national policies such as Saudization. From my 1<sup>st</sup> empirical work, in particular the material from Company 1, it appears that a distrust and lack of confidence in an ERP system does not necessarily make staff resist the ERP system, because such problems could work in employees' favour.

Therefore, one of the objectives of the 1<sup>st</sup> empirical work in Chapter 7 is to define the relationship between the factors. I will discuss the relationship between the factors on the acceptance of, or resistance to an ERP systems in the 2<sup>nd</sup> level of analysis.

### **9.3.2. 2nd level**

The second-level themes discuss the interrelationship between factors, in particular the influence of external and internal factors, on change, resistance and on the behaviour of employees. I planned to study the interrelationship between factors by conducting interviews with different people, for example: in private and listed companies; with Saudis and foreigners, employees and managers, and with employees experiencing long and short periods of employment. These differences in the sources of information have been useful in the analysis of the interrelationship between factors on the acceptance of, or resistance to, an ERP system. Most important is my discovery of the significance of the behaviour of employees in explaining the indirect relationship between the external and internal factors such as politics, economics, social culture,



religion and organisational culture, and their roles in regard to the acceptance of, or resistance to, an ERP system.

I found that politics, economics, social culture, religion and organisational culture shape the action of employees. Thus, on an on-going basis the actions of staff become taken for granted and institutionalised. My empirical findings show that foreigners in Company 1 became used to working individually, while Saudis in Company 2 became used to helping each other. One of the main reasons for the behaviour of the foreigners was because of the political and economic structures in place in Saudi at the time of the research, represented by Saudization and the Sponsorship system. Foreigners found it difficult to move from one organisation to another. Therefore, they tended not to pass on their job knowledge and understanding to others. That strategy improved their chances of keeping their jobs.

Some foreigners and Saudis are Muslim, and have the same social culture, but Saudis do not have the political pressure on them that foreign employees do, such as the Sponsorship system and Saudization. Therefore, many of the Saudi employees cooperate with each other, as the religion and social culture influence them to do so, while most of the foreigners compete with each other, even when they are Muslim, as a means of keeping their jobs. Moreover, there are other political factors such as the requirement to train students which influenced Saudi employees in Company 2 towards helping each other, but the same requirement to training students did not similarly influence foreign employees in Company 1.

Beside the positive influences of Social culture and religion on the behaviour of Saudi employees, I discovered many negative influences of those factors. Included here are the nature of working practices between Sunni and Shia Muslim; the tendency not to

criticise others; Saudis refusing to learn ERP, and Saudis not being used to reading. Therefore, external factors such as politics, economics, social culture and religion have different influences on the behaviour of employees which make employees accept or resist the ERP system.

### **9.3.3. 3rd level**

I described in the section above that the behaviour of employees is influenced by many external and internal factors. Understanding the behaviours of employees can help us to understand the influences of those factors on attitudes towards the ERP system.

I believe that my findings, in particular the influence of the behaviour of employees on the acceptance of, or resistance to, an ERP system, can advance our understanding of the important role of Institutional Theory. Therefore, one contribution of my thesis is to develop the Burns and Scapens' (2000) framework and recast it to study change.

Many studies such as Scapens' (2006) indicated that their framework is being used less in studying how institutional change happens. However, Becker (2008) suggests that Burns and Scapens' (2000) framework remains important because it could be extended to link rules, behaviour patterns and dispositions together. Burns and Scapens (2008) indicated that their framework is important because it explains the relationship between the taken-for-granted assumptions within institutions and the individuals' actions through rules and routines followed by them.

In the absence of a universal definition of Institutionalisation, I used Hamilton's (1937) definition:

“...[Institutionalisation] is: ‘a way of thought or action of some prevalence and permanence, which is embedded in the habits of a group or the customs of a people’” (Hamilton, 1932, p. 84, as cited in Burns and Scapens, 2000, p. 5).

This definition is particularly useful because it highlights the importance of the habits of a group and the customs of a people. My evidence has shown that, while the study was conducted in Saudi Arabia, it actually focused on two distinctly different sets of people. It showed that the behaviour of Saudis and foreigners were different because the external and internal influences that they are subject to affect them differently, and it is those influences that can be interpreted as the elements of institutionalisation from which people’s behaviours stem.

Thus it can be seen that the relationship between external and internal factors and the acceptance of, or resistance to, an ERP system is not linear, as suggested by both the Burns and Scapens (2000) framework and the work of others following them (including: Ribeiro, 2003; Busco et al., 2006; Nor-Aziah and Scapens, 2007). Instead, factors both external and internal are the drivers of behaviour. Therefore the ambiguity and lack of clarity of the information that is provided by the ERP system as identified from the evidence of Company 2, could lead Saudis to help each other to overcome the ambiguity, and that finding is similar to that of Sharma et al. (2010). However, the evidence from Company 1 contradicts Sharma et al. in that the ambiguity of the ERP system did not cause foreigners to help each other. On the contrary, it appears that the ambiguity of the ERP system could influence foreigners to use the ERP system in a highly individualistic way. For example foreigners in Company 1 found the ambiguity useful because it made it hard for employees to learn the job from other staff because of their habit of withholding information in order to have a better chance of retaining their jobs. Moreover, the ambiguity of the ERP system could influence foreigners to exhibit

what might be seen as resistance, not so much in refusing an ERP system, but working individualistically and not cooperating with others.

Moreover, the ambiguity of the ERP system did not make staff resist as indicated by Masquefa (2008), but it led staff in both companies to accept the ERP system, albeit in different ways as suggested above. The reason for accepting the ERP system was not the ambiguity of the ERP system per se but the opportunity it gave for staff to avoid liability and blame for mistakes from the senior management. This is because the ERP system was seen as always providing accurate information, even when the employees knew that it was incorrect.

Therefore factors like ambiguity could influence behaviours in regard to resistance to or acceptance of change. My thesis helps to explain the influence of internal and external factors on the acceptance of, or resistance to, an ERP system by emphasising their role in the development or adoption of the repeated behaviour patterns of two different groups of people working in two different organisations.

By drawing out the relationships between factors and the acceptance of, or resistance to, an ERP system, my findings move beyond simply describing the results to allowing one to make a step towards answering the general question driving this study – the question of how factors are interrelated and how they affect the acceptance of, or resistance to, an ERP system. The relationships between factors in my findings suggest that employees' attitudes towards ERP systems are influenced directly by external and internal factors, and also indirectly through the behaviours of employees, which are themselves influenced by external and internal factors such as politics, economics, social culture and religion and the culture of the organisation. Furthermore, my evidence demonstrates that people will behave differently in accordance with how they are

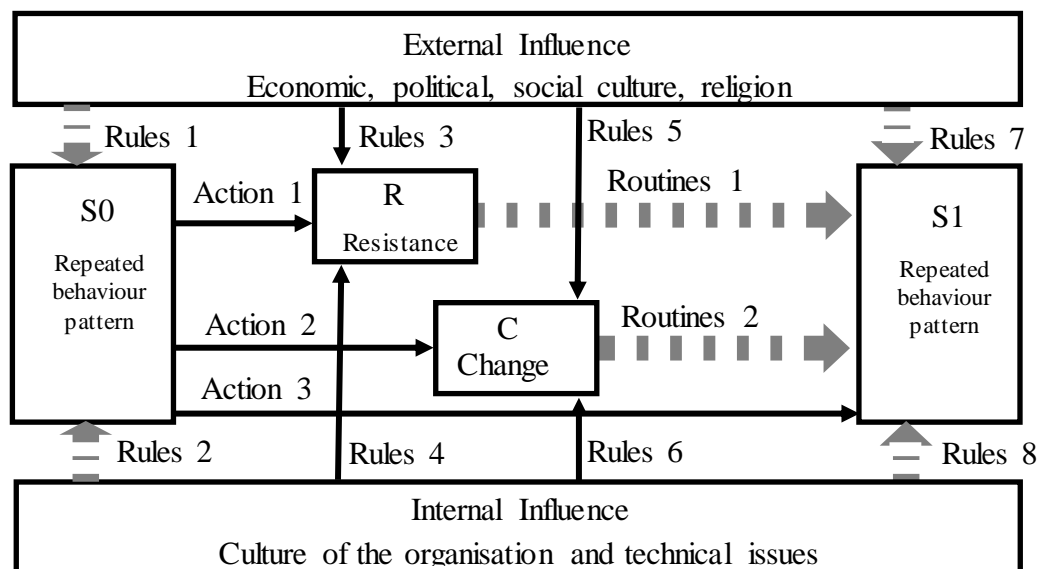
affected by the internal and external factors in the light of their socio-political circumstances, most particularly those in relation to religion and nationality.

The above explained the three levels of analysing my findings. The next section shows a conceptual model that reflects the influence of factors leading to employees' acceptance of, or resistance to, an ERP system.

### 9.3.4. The conceptual model of the thesis

The conceptual model reflects my understanding of the dynamics of the interrelationships between factors, behaviour and acceptance of, or resistance to, an ERP system. The results are reflected below in Figure 9.1. My model uses Burns and Scapens' (2000) framework to explain how external and internal factors influence the behaviour of employees and how the behaviour of employees is institutionalised over time through rules and routines.

**Figure 9.1. The institutionalised of change and resistance**



Source: representation of the findings

The upper and lower box shows the external and internal factors that influence employees to accept or reject ERP system. Those two boxes represents the first level of my analysis which I discussed in Section 9.3.1. above.

The horizontal lines (Rules 1, 2, 3, 4, 5, 6, 7 and 8) represent the second level of your analysis which I discussed in Section 9.3.2. above. Those rules represent the influence from both the external and internal factors on the behaviour of employees, change and resistance.

The vertical lines (Action 1, 2 and 3) represent my third level of analysis which I discussed in Section 9.3.3. above. The third level of analysis emphasizes the importance of the repeated behaviour of employees to explain the acceptance of, and resistance to, an ERP system. Burns and Scapens' (2000) framework can be extended to explain how the external and internal factors (the 1st level of analysis) can influence the behaviour of employees (the 2nd level of analysis), and it explains that how the behaviour of employees can influence the acceptance of, or resistance to, an ERP system. Moreover, the repeated behaviour pattern of employees (S0) can influence the future repeated behaviour pattern (S1).

By drawing the relationships between factors and the acceptance of, or resistance to, an ERP system, the model moves beyond only describing the results and allows one to make a step towards answering the general question driving this study – the question of how factors are interrelated and how they affect the acceptance of, or resistance to, an ERP system. The relationships in the model suggest that the acceptance of, or resistance to, an ERP system is influenced directly by external and internal factors, and also indirectly through the behaviours of employees, which are themselves influenced by external and internal factors such as politics, economics, social culture

and religion and the culture of the organisation. Furthermore, my evidence demonstrates that different ‘peoples’ will be affected differently in accordance with how they are affected by the internal and external factors in the light of their socio-political circumstances, most particularly those in relation to religion and nationality.

These findings make a number of contributions. These contributions are summarised briefly below.

## **9.4. Research contributions to knowledge**

### **9.4.1. Contribution to the management accounting literature**

My thesis makes a number of contributions to knowledge. The research questions were: (i) What is the importance of employee agency, and what personal and environmental influences are there, in effecting the implementation of a new ERP system? (ii) How do individual agents bring about institutional change?

The first contribution of my research is to the management accounting literature addressing change. This contribution has been achieved by examining the role of employees in regard to their behavioural reactions to the introduction of work-related change for management accountants, primarily through the introduction of a new technological system such as ERP. This examination has led to my thesis that both internal and external factors have a significant impact on employees’ behaviours; but that such behaviours are affected by the specific circumstances of employees, including their nationality: foreigners being affected by the Sponsorship system of their employment and the Saudization policy; and religion – primarily which branch of Islam (Sunni or Shia) they are committed to.

In the case of the former factors and their impact regarding the nationality of employees in association with their Sponsorship, such employees are tightly restricted in who they can be employed by and therefore they cannot afford to lose their job, because the Sponsorship system prevented them from moving to a different employer. It seems they believe their job would be under threat if they shared knowledge and information with others, because that would make them dispensable. That position further relates to the Saudization policy whereby employers are strongly encouraged by the government to fill vacancies with Saudis, thereby reducing the need to employ foreigners. Thus, the resistance is not to the ERP system per se, but the end result for employers is that the system cannot be fully capitalized upon because of inter-employee withholding of information, thus giving the impression of resistance. In the case of the latter, religion, Shia Muslims are less respected than Sunni Muslims in Saudi, and therefore they are less likely to both command authority and benefit from the sharing of information that would help work with the ERP system. Again, this means that it is not the ERP system per se that is resisted, but rather the lack of authority by Shia managers over Sunni employees; and the lack of co-operation from Sunni employees with Shia employees. As a result, we see the appearance of resistance, since the system cannot operate as effectively as it is capable of doing because of employee inter-relationships. It can be argued that the resistance is not to change, but that the change allows employees to demonstrate their resistance to other elements that affect them.

The discussion in Section 9.2 shows the research design and the research questions that were developed through the analysis of conflicting evidence produced by the 1<sup>st</sup> empirical work and the literature review. My investigation showed that the relationship between external and internal factors and the acceptance of, or resistance to, an ERP system is not linear but an interrelationship of factors. Identifying relationships between various issues and aspects that affect change, allowed me to approach the



understanding of the effect of different factors on the acceptance of, or resistance to, an ERP system.

The previous discussion of the 2<sup>nd</sup> literature review (in Chapter 3) has shown that there are many factors that influence change and those have tended to be discussed separately, for example: Busco, Riccaboni and Scapens (2006) and Nor-Aziah and Scapens (2007) on trust; Busco et al. (2007) and Sharma, Lawrence and Lowe (2010) on agency; and Yazdifar, Zaman, Tsamenyi and Askarany (2008) on the need to include power politics and social culture. Busco, Riccaboni and Scapens (2006) and Wickramasinghe and Hopper (2005) indicate that including social culture is important to understand the actions of individuals.

The fact that the issues are discussed separately in the existing literature strongly suggests that, until now, there has been an apparent difficulty in linking these factors together. As suggested by Ribeiro and Scapens (2006) the major challenge is to identify relationships between the various issues and aspects that affect change; and this is what I have attempted in my research. Clearly, the process of change can be studied from a range of different perspectives.

There are a number of studies which enabled my progress in this task, such as Busco, Riccaboni and Scapens' (2006) which shows that behavioural elements can influence (un)learning and change. Also Masquefa (2008) finds that financial controllers play an important role in reducing resistance to change, showing that strong and weak ties between people both provide suitable tools to implement a new system. My thesis agrees with Aladwani (2001) and Ansari and Bell (2009) who stress that there is a need to study the needs of the users and causes of resistance:

“To overcome users’ resistance to change, top management has to: study the structure and needs of the users and the causes of potential resistance among them; deal with the situation by using the appropriate strategies and techniques in order to introduce ERP successfully” (Aladwani, 2001, p. 273).

Also, my thesis agrees with Ribeiro (2003) who focuses on the processes of management accounting change, rather than on the influence of ERP systems:

“Indeed, one major conclusion extracted from this month in the company was that [mine] will be a thesis not so much on the impact of ERP systems on management accounting change, but rather on the processes of management accounting change, with a special focus on the reasons that hinder or facilitate that change - one of these being the implementation of such systems.” (Ribeiro, 2003, p. 16).

However, although these studies (Aladwani, 2001; Ribeiro, 2003) and others (including Busco, Riccaboni and Scapens, 2006; Masquefa, 2008 and Ansari and Bell, 2009) emphasised the importance of behaviour, they did not suggest any specific approach to examine the relationship between factors and the acceptance of, or resistance to, an ERP system. Nor, unlike as has been seen in my thesis, did they develop an understanding of what might affect such relationships.

My findings showed that employees *repeated behaviour patterns* and their *acceptance of, or resistance to, an ERP system* are three important elements when studying change; and that they should be studied together because they are linked to one another.

I would argue that each of these three elements plays an important role in explaining the process and outcomes of the introduction of change. Discounting the influence of any of these issues or factors, and the links between them, could significantly over-emphasise the importance of one reason over another.

My thesis follows the call for researchers (such as Busco, Riccaboni and Scapens, 2006; Nor-Aziah and Scapens, 2007; Busco et al., 2007 and Sharma, Lawrence and Lowe, 2010) to focus on the role of employee behaviour. In relation to the introduction of change My thesis has generated empirically grounded findings which specifically link external and internal factors with the behaviours of staff following the introduction of change and resistance. The findings suggested a number of relationships that link external and internal factors to the behaviour of staff, thus allowing the effect of those factors on the behaviour of staff to reflect how they come to work with ERP systems. My findings also showed that external and internal factors can influence the acceptance of, or resistance to, an ERP system directly during the implementation of an ERP system.

My findings (See section 9.3 above) describe a complex mechanism that links external and internal factors directly to the behaviour of staff and my thesis showed the interrelationship between factors to the extent that has not been achieved in the previous contributions to the field. Therefore, I present my findings of the role of the behaviour of employees as a primary contribution of my thesis.

In addition to the first contribution described above, my thesis makes a number of other contributions to the literature in relation to the factors that affect the acceptance of, or resistance to, an ERP system.

#### **9.4.2. Contribution to Burns and Scapens (2000)**

The second contribution is in my adapted use of Burns and Scapens' (2000) framework. Studies such as Scapens' (2006) indicated that the 2000 framework is being used *less* in studying how institutional change comes about. However, Burns and Scapens' (2000) framework continues to be *useful* in trying to understand issues such

as: stability; why there is resistance to change, and how institutions *and* individuals shape rules and routines.

My evidence shows that examining the repeated behaviours of staff is important to explaining the *acceptance of, or resistance to, an ERP system*, therefore the Burns and Scapens' (2000) framework continues to be important because it is *useful* to understand the repeated behaviour pattern. Moreover, Becker (2008) indicates that Burns and Scapens' (2000) framework is significant because it links rules, behaviour patterns and dispositions together. For instance, further insight can be drawn from Burns and Scapens' (2000) framework, which emphasises how rules are institutionalised over time through the development of routines.

Institutionalisation can help to link attitudes and behaviours towards change with factors that may not exist in the present; for example, when past rules such as social culture or politics influence the (re)actions of employees, the actions of people driven by such factors become a habit through their routine practice. Thus, while formal rules may disappear, humans might continue acting in the same way. In this context we see that power and influence over people remain even without rules, due to the habits developed through routine. An example of the result of that can be seen within my thesis in how the influence of social culture on employees leads them to help each other, or not to help each other depending on the socio-cultural, socio-religious circumstances.

From that it can be appreciated that the generative structures of employee behaviour are not observable, and the factors that have influenced people in the past may not exist now but they nevertheless persist in having influence over behaviours and attitudes. In this regard too, while I have developed it somewhat, Burns and Scapens' (2000) framework is important, because it can help to describe the generative structures.

In short, my thesis uses Burns and Scapens' (2000) framework to explore how external and internal factors influence the repeated behaviour of staff, change and/or resistance, and how the repeated behaviour of staff influences resistance and/or change. It is my contention that it could be difficult for a researcher from a different environment to understand the role of individual human agency without including the factors that influence those individuals in that specific context.

### **9.4.3. Contribution to the organisational routines literature**

It is my contention that my thesis makes the 3<sup>rd</sup> contribution to the organisational routines literature. Hodgson (2007) identifies an important gap in the literature. By showing that studies focusing on how individuals are affected by rules and social culture tend not to explain how social culture influences the motivations of individuals. My thesis considers the behaviour of staff to reflect the influence of many external and internal factors such as social culture, politics and religion. Moreover, there are few empirical studies focusing on the interrelationship between factors and their impact on acceptance of, or resistance to, an ERP system (See Chapter 3). The results of my thesis provide a structured description and analysis (grounded in empirical data) of the influence of external and internal factors on attitudes and the behaviours of staff in the context of change. As such, my thesis contributes to the current state of knowledge of the interrelationships between, for example, socio-cultural, religious, economic and political factors and resistance, change and behaviours of staff, and asks further questions about the factors that influence the employee behaviours as primary elements of the acceptance of, or resistance to, an ERP system.

My thesis introduced the behaviour of staff perspective, drawing specifically on Becker (2005a) who suggests that the behaviour of employees can influence attitudes

towards and reactions to change. My thesis uses the notion of behaviour as an analytical lens to investigate how external and internal factors influence the behaviour of staff to resistance or change.

Exploring the influence of external and internal factors on the behaviour of employees is not easy. It needs patience, for example I conducted the 1<sup>st</sup> empirical work to identify the factors that influence employees to accept or resist ERP systems. Then I investigated those factors in the literature review. Next, I moved to find out whether external and internal factors could influence the behaviour of staff in regard to change.

After I found the important role of behaviour of staff I examined and conducted the 2<sup>nd</sup> empirical work. My thesis shows that there is a direct influence of external and internal factors on the attitudes and behaviours of employees in regard to ERP systems, and there is an indirect influence of external and internal factors to the acceptance of, or resistance to, an ERP system through the behaviour of employees.

#### **9.4.4. Contribution to the model of Dubois and Gadde (2002)**

The 4<sup>th</sup> contribution is a methodological one related to adding the exploratory and explanatory stages to the model of Dubois and Gadde (2002). Detailed explanation of the two stages is covered in Chapter 5, where I discuss the methodology of collecting data. My research design helped me to test Burns and Scapens' (2000) framework in the 1<sup>st</sup> empirical work and extend it in the 2<sup>nd</sup> empirical work. Therefore, my design follows neither a purely deductive nor inductive approach, but it uses an abductive approach where I placed induction and deduction in a complementary rather than competitive context.

The exploratory case studies (the 1<sup>st</sup> empirical work) and explanatory case studies (the 2<sup>nd</sup> empirical work) identify the external and internal factors that influence the acceptance of, or resistance to, an ERP system in two case companies in Saudi Arabia (See Table 9.1 above). The evidence showed that staff attitudes and behaviours play an important role in explaining how a particular factor such as personal or technological distrust influences both acceptance of, or resistance to, an ERP system. Moreover, it is clear that external factors such as social culture, politics, religion and economics influence the acceptance of, or resistance to, an ERP system through the behaviour of employees.

## **9.5. Limitations, implications and recommendations**

### **9.5.1. Limitations**

My thesis identifies many external and internal factors. However, my thesis does not aim to generalise those factors nor their influence because they could be different from one country to another, from one organisation to another or from one employee to another even in the same organisation. However, my thesis showed that there are number of factors that influence Saudis and foreigners. Therefore, my findings can be generalised to employees who influenced by similar factors such as in the developing countries.

On of the main contribution it is not that those external and internal factors influence directly the acceptance of, or resistance to, an ERP system, however, my thesis provide evidence to reject the linear view of influences. Those factors (See section 9.3.) are interrelated on that they can influence different people differently. For example mistake that is provided by ERP system made Saudis and foreign employees to accept the ERP system rather than resist it. The reason is due to the fact that employees

feel safe for using the ERP system as following order from the senior managers, even though employees do not trust the system. However, Saudis help each other to overcome the limitation of ERP system, whereas foreigners overcome the limitation of ERP system individually, since they are in competition with other employees as a result of Saudization policy.

My thesis followed many studies that focused on the implementation period of ERP systems to explain how external and internal factors influence resistance or change for example: Yazdifar (2004); Yazdifar et al. (2008); Kholeif, Abdel-Kader and Sherer (2008); Sharma, Lawrence and Lowe (2010). Nonetheless my thesis did not cover all factors that influence the behaviour of staff, nor how the behaviour of staff over time is influenced by an ERP system. A PhD student with limited resources does not have enough time or money to do a longitudinal case study.

Finally, it is the limitation of all (doctoral) research that by the point at which it is presented circumstances in the case study companies might well have changed. Thus, it is unfair to say that the employees who are now within the company would display all of the behaviours that I have engaged with in my thesis, because many of them, particularly the Saudis, might have moved to other companies.

### **9.5.2. Implications of my research for other researchers**

I encourage other researchers to use the abduction approach rather than pure induction or deduction approaches to identify and explain how many factors interact with each other and affect the acceptance of, or resistance to, an ERP system.

Becker (2005a) stresses the importance of discovering the relationship between the three definitions for routines and indicates that induction and deduction are not well



suited to discovering the mechanism. He argues that abduction should be used in research on routines to explore the mechanisms which give rise to repeated behaviour patterns.

I encourage PhD students to use data management software early in their search, thus they may have plenty of time to improve their skills in managing information. In my experience I found that my skills of analysing qualitative data increased after using EndNote. Besides its use in referencing, it was useful in collecting and analysing the literature review and the 1<sup>st</sup> empirical work and the 2<sup>nd</sup> empirical work. EndNote is useful in linking theory, the literature review, the 1<sup>st</sup> empirical work and the 2<sup>nd</sup> empirical work together. It provides the flexibility needed to arrange and rearrange information according, for example, to themes developed during analysing interviews. In this recommendation, I agree with and consolidate the suggestions of Saunders et al. (2009), who encourage using database to document and analyse literature and case studies, and Yin (2009) who indicated that databases can increase the reliability of case studies.

### **9.5.3. Implications for practice**

Becker (2005a) argues that rules could be underlying mechanisms that influence action and establish repeated behaviour patterns. Therefore, Becker (2005a) highlights the important role of human agency, arguing that humans are influenced differently by different rules including formal rules. I would add to that ‘rules’ are essentially formed through the development of social and organisational cultures. It is likely that as a result of investigating the role of human agency and the factors that influence it in these contexts, senior management could explore and utilise these factors and use them to make the implementation of an ERP system successful.

Becker and Zirpoli (2009) show that companies could explore influences on the behaviour of employees, for example organisational routines and companies, and then could exploit them to make the change successful. However, in my thesis I found that C1FM1 in Company 1 (See Chapter 7) negatively exploited the behaviour of employees to make employees resist a job description project. Also, the trainer in Company 2 (See Chapter 9) negatively exploited the behaviour of employees to make employees gave him an 'A-plus' score in the evaluation. Neither of these situations were useful to the implementation of the ERP system.

Understanding the exploitation of employee behaviour was important in my study because it reveals how the companies participating in the study sought to accomplish the implementation of an ERP system. Explaining how the companies attempt to exploit organisational routines to implement ERP can help to understand the main factors used to make the implementation of ERP successful as well as how employees seek, and are able, to effect resistance, resulting in a less than wholly successful implementation as has been demonstrated in my thesis. Conversely, the knowledge from my thesis can also show what the company could do to avoid resistance, thereby better enabling the change and the benefits that can come from it.

Drawing on the lessons to be learned from my study, senior management could exploit organisational routines to make the implementation successful. The evidence shows that employees can and often do help one another. However, for various reasons in the social, political, economic and religious contexts, they do not do so when their colleagues 'fall' outside of the 'appropriate' context (e.g. if they are a Shia rather than a Sunni Muslim, as seen from my analysis of Company 2), or if they are foreign (even if they are in the same department, as seen from my analysis of Company 1).

My evidence actually shows that senior management tries to encourage working relationships between colleagues, for example, by organising a breakfast every month for the employees and having a training scheme called rotation, in which employees train other employees for two weeks. One of the interviewees C2Acc24 (see Section 8.3.1. Social culture and religious influences on change) indicated that, in addition to that formal arrangement, employees gather every week, thus indicating that they see such an arrangement as useful. That finding suggests that senior management can capitalise on the behaviour of employees by supporting these activities. In addition, my evidence from Company 1 suggests that senior management could encourage greater employee relations between employees with similar jobs in different departments, with the result of them helping each other, rather than competing with each other to maintain their jobs.

This research explores how senior management introduce change to their organisations by way of implementing ERP systems; and considers how senior management might capitalise upon organisational routines to overcome employee resistance. My findings are important because they will show the factors that actually influence the behaviour of the human agent. Thus, taking on board lessons from my thesis will provide an opportunity for companies to capitalise on these factors and perhaps do more ‘in-house’ research in order to identify the factors that influence *their* employees which change from time to time, rather than depending on generalised models likely to be incompatible with their circumstances.

#### **9.5.4. Future research opportunities**

In my thesis I dealt with the factors that appeared to influence the acceptance of, or resistance to, an ERP system. However, many studies showed that each factor (trust,

routines, power) could mean different things. I would argue that the main problem in the extant research is due to the lack of classification of those factors in management accounting literature as discussed in the literature review in Chapter 3.

It is clear from my study that national context is very important when considering the impact of the factors in a context of change. Therefore, I suggest that picking up from my findings would provide an opportunity for future research to examine those factors in different countries to explore how they interact with each other. It could add new dimensions to the study of change and the nature of resistance in regard to new innovations such as ERP systems in management accountancy.

One of the proposed research methods for future study is Action Research (Johansson and Siverbo, 2009 and Ansari and Bell, 2009). That approach would enable the researcher to spend more time with participants and would therefore enable him/her to explore the behaviour of all staff more thoroughly than I was able. By engaging with a participant company in an Action Research mode, the researcher would become part of the process and would, therefore, be able to communicate with participants where their behaviours are compromised by not only the change, but also their positions. Clearly, in order for such a project – as well as the change project - to work, senior management would have to be committed to change their own approaches as it was seen in my study that the way in which work was organised in Companies 1 and 2 was part of the problem leading to resistant behaviours. It must be said though, that in the context of a country such as Saudi Arabia, with the tradition of autocracy at the highest level of government and throughout the management system of individual organisations, the agreement for such a commitment would likely be difficult to secure. That does not, however, compromise the usefulness of the suggested approach in other national contexts.

## **9.6. Conclusion**

In this chapter I identified the politics, economics, social culture, religion, organisational culture and technical issues, all of which influence the acceptance of, or resistance to, the introduction of an ERP system. I identify the concept of employee behaviour to explain the indirect influence of those factors on the acceptance of or resistance of employees to the ERP system.

Chapter 9 concludes my thesis. It reviewed the research process that led to the development of my thesis. It described the development of the research question, the findings, the contributions, the limitations, the implications for future research and practice and future research opportunities.

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## Appendixes

### Appendix 2.1 Helpful journals

**Table 1. Journals suggested by Lowe and Locke (2005)**

	Name of journals	Printed ISSN	Online ISSN
1	Abacus		1467-6281
2	Accounting and Business Research		14788
3	Accounting and Finance	0810-5391	1467-629X
4	Accounting Business and Financial History		0958-5206
5	Accounting Education: An International Journal	0963-9284	1468-4489
6	Accounting Forum		0155-9982
7	Accounting Horizons	0888-7993	1558-7975
8	Accounting, Auditing and Accountability Journal		0951-3574
9	Accounting, Organizations and Society		3613682
10	Auditing: A Journal of Practice and Theory	0278-0380	1558-7991
11	Behavioral Research in Accounting	1050-4753	1558-8009
12	Contemporary Accounting Research	0823-9150	1911-3846
13	Critical Perspectives on Accounting	1045-2354	1045-2354
14	Financial Accountability and Management	1468-0408	
15	Issues in Accounting Education	0739-3172	1558-7983
16	Journal of Accounting and Economics		0165-4101
17	Journal of Accounting and Public Policy		2784254
18	Journal of Accounting Education		7485751
19	Journal of Accounting Research		0021-8456
20	Journal of Accounting, Auditing and Finance		0148-558X
21	Journal of business finance & accounting		0306-686X
22	Journal of International Financial Management & Accounting		1467-646X
23	Journal of Management Accounting Research	1049-2127	1558-8033
24	Management Accounting Research		1044-5005
25	Review of Accounting Studies		1380-6653
26	The Accounting Review	0001-4826	1558-7967
27	The British Accounting Review		0890-8389
28	The European Accounting Review		0963-8180
29	The International Journal of Accounting		0020-7063

**Table 2. Journals used from Rom and Rohde (2007)**

	Name of journals	Printed ISSN	Online ISSN
1	Abacus		1467-6281
2	Academy of Management Journal		0001-4273
3	Academy of Management Review		0363-7425
4	Accounting and Business Research		14788
5	Accounting and Finance	0810-5391	1467-629X
6	Accounting Forum		0155-9982
7	Accounting, Auditing and Accountability Journal		0951-3574
8	Accounting, Management and Information Technologies (2000)/Information and Organization (2001)		1471-7727
9	Administrative Science Quarterly		0001-8392
10	Advances in Accounting Information Systems (1999)/International Journal of Accounting Information Systems (2000)		14670895
11	Artificial Intelligence in Accounting and Auditing		
12	British Accounting Review	0890-8389	1095-8347
13	Business Process Management Journal		1463-7154
14	Communications of the Association for Information Systems		1529-3181
15	Contemporary Accounting Research	0823-9150	1911-3846
16	Critical Perspectives on Accounting	1045-2354	1095-9955
17	European Accounting Review	0963-8180	1468-4497
18	Financial Accountability and Management	1468-0408	
19	Information Systems Journal		1365-2575
20	Information Systems Research	1047-7047	1526-5536
21	International Journal of Intelligent Systems in Accounting, Finance and Management	1055-615X	1099-1174
22	International Journal of Operations and Production Management		0144-3577
23	Journal of Accounting and Economics		0165-4101
24	Journal of Accounting Research		0021-8456
25	Journal of Accounting, Auditing and Finance		0148-558X
26	Journal of business finance & accounting		0306-686X
27	Journal of Information Systems	0888-7985	1558-7959
28	Journal of Management Information Systems		0742-1222
29	Journal of Management Studies		1467-6486
30	Journal of the Association for Information Systems		1536-9323
31	Logistics Information Management (2003)/Journal of Enterprise Information Management (2004)		1741-0398
32	MIS Quarterly		0276-7783
33	Production and Operations Management		1059-1478
34	Review of Accounting Studies		1380-6653
35	The Accounting Review	0001-4826	1558-7967
36	The Journal of Bank Cost and Management Accounting (2003)/Journal of Performance Management (2004).		1949-971X



### 3. Other journals

	Name of journals	Printed ISSN	Online ISSN
1	Australian Accounting Review		1835-2561
2	Business Horizons		0007-6813
3	International Journal of Enterprise Information Systems	1548-1115	1548-1123
4	Journal of accounting & organizational change		1832-5912
5	Journal of Institutional Economics		1744-1374
6	Qualitative Research in Accounting & Management		1176-6093


## Appendix 4.1: Poster in research process

(see p. 135) This poster is presented in The PhD Journey Conference 2012 is on 6th and 7th November 2012 and hosted by University of Aberdeen.



# Qualitative Research Process Using Abductive Approach

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### 1. Introduction

A less experienced PhD candidate needs a flexible form of research design to tell a story, since the understanding of the researcher is continually evolving, which leads the student to change the focus of the research and the methods of access to information.

A story is an argument that starts with the recent discussions in the literature and ends with an explanation of the way the study has changed these discussions. The middle part provides the evidence for the development of the case and the theoretical points that have brought about the change in the literature (Dubois and Gadde, 2002).

This poster shows the process of research adopted by Dubois and Gadde (2002). The investigator continually reviews his/her analytical framework by moving from empirical material to theory and then back again.

### 2. The approach of the thesis

There are three approaches: deductive, inductive and abductive. The approach is important because influences the research design.

#### Deductive approach

Uses quantitative measures to develop or test theory or hypothesis. It aims for generalization and requires control over data to allow the testing of hypotheses. However, it ignores humans' interpretation of their social world. See blue line in Figure 1.

#### Inductive approach

Uses qualitative measures to develop theory as a result of data analysis. It focuses on small samples. However, it focuses on the interpretation of the human and does not allow alternative explanations. See red line in Figure 1.

#### Abductive approach

Uses both deductive and inductive approaches. It constant moves from the empirical to theoretical dimensions of analysis. See blue and red lines in Figure 1. Dubois and Gadde (2002) found the logic of abductive is useful than just use of the pure inductive or deductive approach. Lukka and Modell (2010) state abductive is gradually accepted as an important part in interpretive research.

### 3. The process of research

There are two processes. The first process is matching theory and reality. The second process is direction and redirection.

#### Matching theory and reality

Matching between theory and reality is done by going back and forth between framework, data sources, and analysis. It could not be done by purely inductive or deductive approach (Kakkuri-Knuuttila et al., 2008ab).

In my thesis I develop a general framework based on Burns and Scapens' (2000) framework. Some of the evidence does not fit in this framework. Therefore a literature review is needed to explain the new findings.

#### Direction and redirection

Focuses on using more than one source of evidence and to discover new dimensions of the research problem. Direction and redirection of the study play an essential part in achieving matching.

The direction of my thesis is influenced by the theory, the literature review and explanatory case study.

### 4. Components of research design

There are four factors influencing the research process. See the blue, red, purple and green circles in Figure 1.

#### The role of theory

The literature review could help to find black holes or could leads to white spots. Instead of spending most of the time on the literature review there is a need to also engage in the case to adopt the boundaries of the real world and to focus on relevant literature and theory.

#### The boundaries in the empirical world

The boundaries in the empirical world mean what parts of the empirical world should be addressed in the case. However, reality needs something to be defined. The theory could help in defining the boundaries.

#### The role of the framework

The framework will help to link the theory and the evidence. Empirical findings could help to guide the research, but the researcher needs to be open to many possibilities.

#### The evolving case

The evolving case can be seen as a 'tool' because the case evolves during the study to a product. The data from the case can be seen as pieces in a jigsaw puzzle. At first only a few pieces fit.

### 5. Stages of research process

#### Stage 1: Exploratory

1<sup>st</sup> literature review and 1<sup>st</sup> exploratory case study. I identify the gaps and directions in the literature and conduct interviews. Then I match theory with evidence to direct my research.

#### Stage 2: Explanatory

2<sup>nd</sup> literature review and 2<sup>nd</sup> explanatory case study. After the literature review I develop the theoretical framework which has insight from the literature review, theory and 1<sup>st</sup> exploratory case study. Then I conduct the 2<sup>nd</sup> explanatory case study. Then I match theory with evidence to direct my research.

#### Stage 3: Explanatory

3<sup>rd</sup> literature. At this stage I identify the studies that support my findings and challenge 1<sup>st</sup> and 2<sup>nd</sup> literature.

### 6. Research process



Figure 1: Research process cited with amendment from (Dubois and Gadde, 2002, p. 555).

### 7. Conclusion

Research design explores the three stages of the research process. In short, the three stages start with literature and end with empirical evidence. Matching theory with reality can help to identify the case and build the theoretical framework.

Using this research process a new PhD student can have a flexible design between deductive and inductive to tell the story of his/her thesis.

The framework and the case play big part in explaining the research process. The research process develops through conflicts between the evolving framework and the evolving case. The poster provides a helpful example of both theoretical development and a research process.

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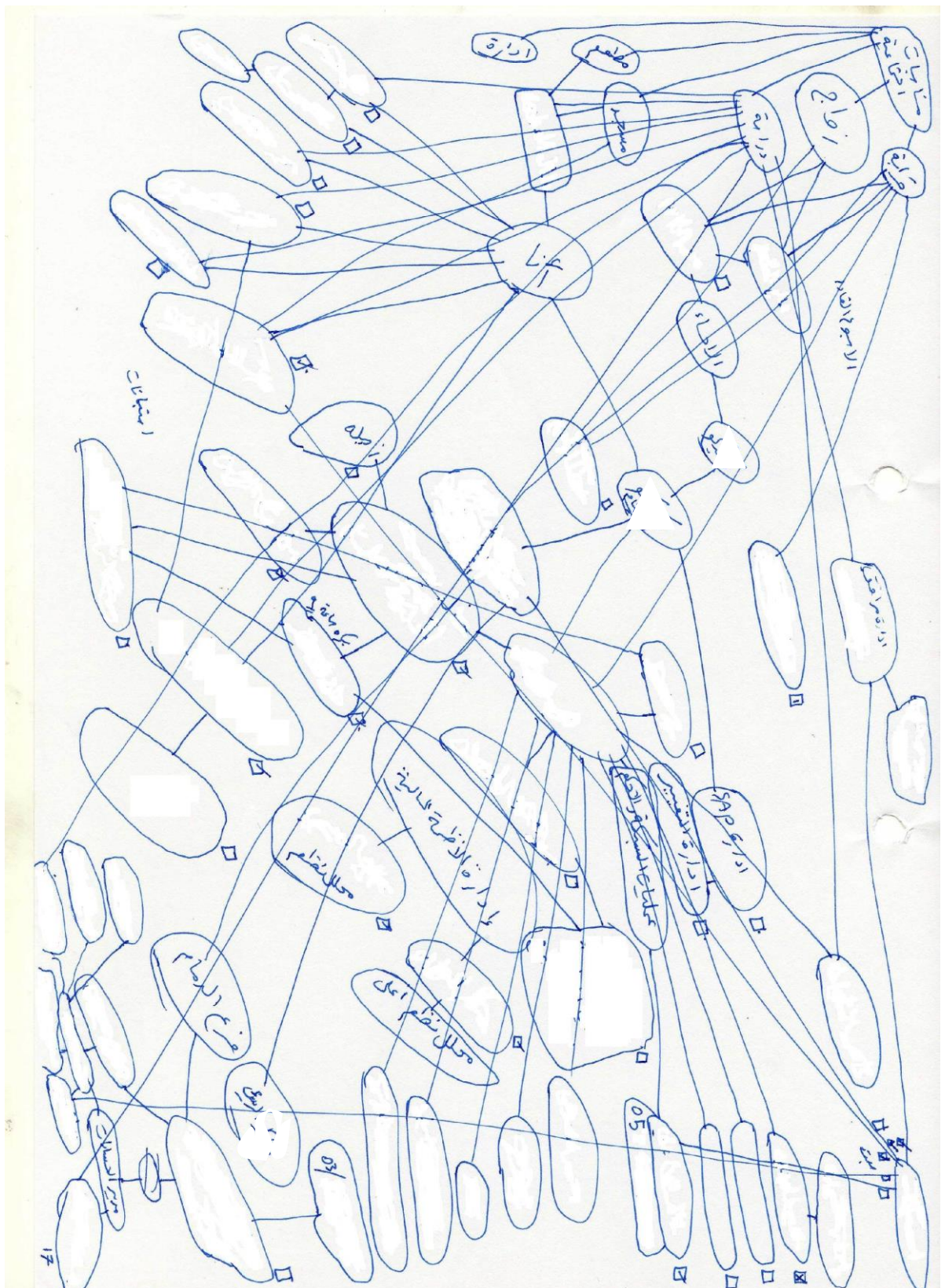
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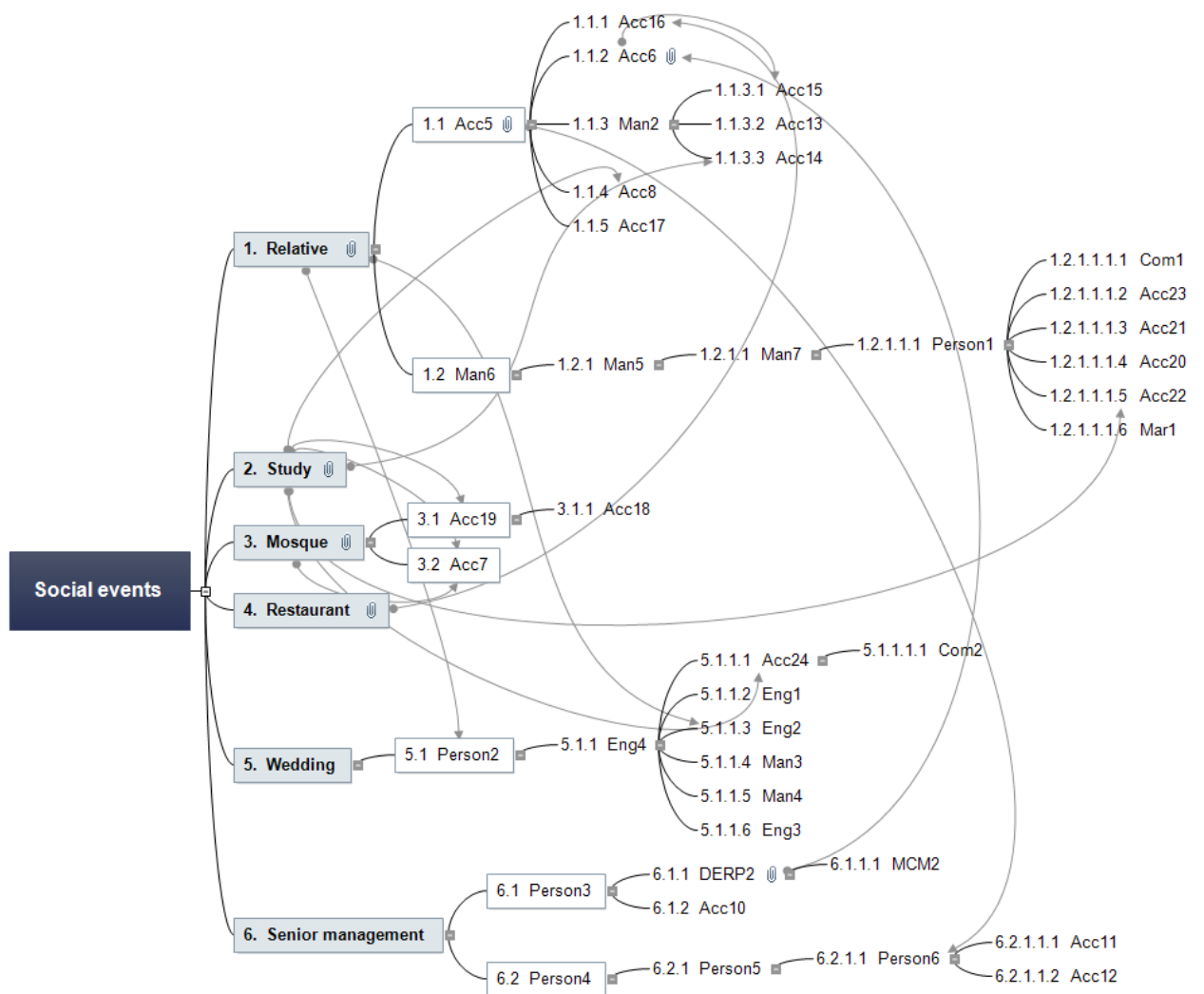


## Appendix 6.1: Mind map of my Snowball technique

(see p. 169)



## Mind map in English



## Appendix 6.2: Codes for the 1<sup>st</sup> empirical work

(see p. 143, p. 173)

Required data	Codes
1- When the ERP implementation take place? What department?	link:1:
2- Is the implementation successful? How do you know?	link:2:
3- Is employee get used to use the new system? who can use and who can't use?	link:3:
4- What type of employee use the system? Accountant. IT?	link:4:
5- What problems related to job of accountant do you have until now of using new system?	link:5:
6- Why employees use the new system on the way they use the old system?	link:6:
7- Do you evaluate the use and success of ERP in your organisation? (you can use the questionnaire to evaluate)	link:7:
8- what time is it possible to do 30 interviews next year on the company that include managers and employees?	link:8:
9- other questions	link:9:
10- to know which documents might be relevant for further inquiry. Related to the company from outside the company.	link:10:
11- relevant data in the company	link:11:
12- empirical observation	link:12:
13- level of analysis	link:13:
14- company 1	link:14:
15- company 2	link:15:
16- Name, Job	link:16:
17- External influence. Macro level.	link:17:
18- Names of employee to interview in the future.	link:18:
19- emotional response 1 2 3 4 5	link:19:
20- problem faced. Example no recording.	link:20:
21- information about the case. Example size of company, how many companies, employee,	link:21:
22- issues and problems on the company	link:22:
23- change management, or mangers	link:23:
24- management accounting.	link:24:
25- prepare for pilot visit.	link:25:
26- information about the software example ERP	link:26:

The table above shows the codes that I use to collect and analyse interviews. The first part of the first column shows the questions that I asked the interviewees. The second column shows the codes. The first part of the codes is (link:) which I chose to represent the evidence from the case study. The second part of the code is a number,

such as (:1:) which refers to the question I ask interviewees. The third part of the codes is (:a) which represent the theme that I emerge from interviewers (see Appendix 8.4).



Information Sheet Used in Case Study Interviews

Project Title:

Using Institutional Theory to evaluate change in Management Accounting: Insights from the Middle East

Researcher:

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Supervisors:

Dr. Anne Fearfull

Dr. Elizabeth Monk

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#### Purpose:

The aim of this project is to determine if changes are made by the implementation of enterprise resource planning (ERP) systems on the work and behaviour of management accountants. Information Technology may have an effect on the nature of working as an accountant, this research aims to study the nature of working as an accountant and how it has changed by using the advanced management systems such as Enterprise Resource Planning (ERP). In particular, this study hopes to determine the (i) issues facing new staff and experienced in using the ERP system. (ii) What, if any, are the constraints and why is this so? (iii) What, if any factors affect the implementation of ERP and (iv) how do management accountant regard change?

#### Procedures, Data Collection and Use:

In-depth semi-structured interviews and discussions with Management Accountants (and others where appropriate, for example Change Management, sub managers) will be used for gathering data.

Ahmed Mubarak Alrajeh will conduct the interviews, which are planned to be of about 60 minutes duration. The semi-structured interviews will be conducted in a free-flowing manner, and the investigators will provide a forum that encourages executives to discuss relevant information. With permission, the interview will be tape-recorded to gain an accurate record and subsequently transcribed. You are assured of complete confidentiality. The data will be stored in secure places (locked filing cabinets, password protected computer files). Neither you nor your organisation will be identified directly in any publications that may arise from the research. Any references to the information you provide will be referred to only by a pseudonym that will not allow identification of you or your organisation. Please note that the confidentiality of information provided can only be protected within the limitations of the law.

#### Participation:

Participation in this research is entirely voluntary. Participants can withdraw at any time and withdraw any data.

#### Queries or Concerns:

If you have any queries or concerns about the research, please contact Ahmed Mubarak Alrajeh at the above address (email: aalrajeh@dundee.ac.uk) or telephone +00966 (0) 553466631.



### Interviewees Background information

What is the name of the organisation?						
	manager	accountant	administrative	technical	other	
What is your current job title?						
	Less than 1 year	1-2 years	3-5 years	More than 5 years		
How long have you been in this position?						
	Less than 1 year	1-2 years	3-5 years	More than 5 years		
How many years have you worked in your current organisation?						
	High School	diploma	Bachelor	High diploma	Other	
What is your education?						
Do you have professional qualifications?						
	Less than 1 week	2-3 weeks	1 month	2-3 months	More than 4 months	
How long have you have training for ERP system?						

### Questions for interviews

- 1-Why was SAP introduced or what were the main factors influencing their decision?
- 2- What factors affect your ability to do your job as an accountant?
- 3-Is all information you need to do your job available? Why not information is not available?
- 4-What are the main differences to your job now SAP has been introduced?
- 5-What factors influenced the implementation of the new system?
- 6- What influences training or development within the company. Is this sufficient for employee's needs?
- 7- What is your main authorities within the company?
- 8- Can you please write the management structure of your job or in the company? (who do employee report to and why?)
- 9- What positive and negative does the new system to your job?
- 10- What positive and negative factors influence the implementation of ERP? and why?

## Appendix 8.2 Interview Questions in Arabic



إستمارة إستبيان

عن التغير في طبيعة عمل المحاسب بعد تطبيق نظام إدارة موارد الشركة

The Change on Accountant Job After Implementing Enterprise Resource  
Planning System ERP

أحمد بن مبارك الراجح

جامعة دندي

المملكة المتحدة

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بسم الله الرحمن الرحيم

سعادة المكرم  
السلام عليكم ورحمة الله وبركاته  
أما بعد،،

أقوم حالياً بتحضير درجة الدكتوراه في جامعة دندي بالمملكة المتحدة و ذلك عن التغير في طبيعة عمل المحاسب بعد تطبيق نظام إدارة موارد الشركة ساب في المملكة العربية السعودية، بإشراف كل من الدكتور أن فيرفيل و الدكتور إليزابيث مونك. وكجزء هام من الدراسة التطبيقية للبحث اقوم بمسح إستباني بغرض التعرف على آراء الأطراف ذات الصلة بالشركة، حول المواضيع المتعلقة باستخدام برنامج (Accpac) في عمل المحاسب. ولعلمي التام بإيمانكم بأهمية دعم وتشجيع البحث العلمي ودوره في تطوير المجتمع، فإنني أرجو منكم التكرم بالإجابة على أسئلة الاستمارة المرفقة وإعادة إرسالها بالطريقة المتفق عليها مع الباحث. كما لا يفوتني التنويه على أهمية عدم التردد في إظهار وجهة نظرك في مختلف القضايا المطروحة وعدم القلق من عدم المعرفة أو الالمام ببعض الأمور، حيث أن أحد أهداف البحث هو التعرف على الواقع الفعلي لإستخدام برنامج (Accpac)، كما أن جميع المعلومات ستعامل بسرية كاملة ولن تستخدم إلا لأغراض البحث العلمي فقط ولن يتم ذكر أسماء ومراكز المشاركين في الإستبيان. وفي حال رغبتكم في الحصول على ملخص لنتائج البحث عند إنتهائه فإنه يسرني إرساله إليكم بالطريقة التي تفضلونها. شاكرا ومقدرا حسن تعاونكم،،

أحمد بن مبارك الراجح  
Email: a.alrajeh@dundee.ac.uk  
جوال: 0553466631

المشرفين:  
Dr. Anne Fearfull

Dr. Elizabeth Monk

## Interviewees Background information

اسم الشركة؟					
أخرى	تقني	إداري	محاسب	مدير	
ما هو المسمى الوظيفي الحالي الخاص بك؟					
أكثر من 5	3-5 سنة	1-2 سنة	أقل من سنة		
كم فترة خدمتك في وظيفتك الحالية؟					
أكثر من 5	3-5 سنة	1-2 سنة	أقل من سنة		
كم فترة خدمتك في الشركة؟					
أخرى	دبلوم عالي	بكالوريوس	دبلوم	ثانوية	
ما هو مستواك التعليمي؟					
هل لديك مؤهلات مهنية؟					
أكثر من 4	3-2 شهر	1 شهر	3-2 اسبوع	أقل من اسبوع	
كم فترة تدريبك على نظام اي ار بي؟					

### أسئلة المقابلات

- 1- لماذا الشركة قررت تطبيق نظام ساب، أو ما هي العوامل الرئيسية التي تؤثر على قرار الشركة؟
- 2- ما هي العوامل التي تؤثر على قدرتك على القيام بعملك كمحاسب؟
- 3- هل كل المعلومات التي تحتاجها للقيام بعملك المتاحة؟ ولماذا المعلومات غير متوفرة؟
- 4- ما هي الاختلافات الرئيسية لعملك بعد استخدام نظام ساب؟
- 5- ما هي العوامل التي أثرت في تطبيق النظام الجديد؟
- 6- ما الذي يؤثر على التدريب أو التطوير داخل الشركة. هل هذا كاف لاحتياجات الموظفين؟
- 7- هل لديك تفويض يناسب مهام وظيفتك. أو هل تستطيع الحصول على المعلومات التي تحتاجها؟
- 8- هل هيكل المهام الوظيفية مطابق للواقع. هل تأثر بعد تطبيق نظام الساب؟
- 9- ما هي إيجابيات و سلبيات نظام ساب على وظيفتك؟
- 10- ما هي العوامل الإيجابية والسلبية التي تؤثر على تطبيق نظام ساب، ولماذا؟

## Appendix 8.3: Codes for the 2<sup>nd</sup> empirical work

(see p. 143, p. 215)

Required data	Codes
27- Why was ERP introduced?	link:27:
28- What were the main factors influencing their decision?	link:28:
29- What factors affect your ability to do your job as an accountant? The Catalyst.	link:29:
30- What factors affect your ability to do your job as an accountant? The barrier	link:30:
31- 3-What kind of information do you need to do your job or how available is this?	link:31:
32A- 3-What kind of information do you need to do your job or how available is this? Why not is not available	link:32A:
32B- 3-What kind of information do you need to do your job or how available is this? Why it is available	link:32B:
33- What are the main differences to your job now ERP has been introduced?	link:33:
34- What factors influenced the implementation of the new system?	link:34:
35- What influences training or development within the company. Is this sufficient for your needs?	link:35:
12- Why training is effective?	link:12:
14- Why training is not effective?	link:14:
15- Who long is the training?	link:15:
36- What is your main authorities within the company?	link:36:
37- Can you please write the management structure of your job or in the company? (Who do employees report to?	link:37:
39- What positive does the new system to your job?	link:39:
40- What negative does the new system to your job?	link:40:
41- What positive factors influence the implementation of ERP?	link:41:
42- What negative factors influence the implementation of ERP?	link:42:
43A- The availability of User's Guide?	link:43A:
43B- Positive comment of User's Guide	link:43B:
43C- Negative comment of User's Guide	link:43C:
44- Do your colleagues train you on SAP?	link:44:
60-Religion	link:60:
61- Experience	link:61:
62- Education level.	link:62:
63- Nationality.	link:63:
64- Professional certification	link:64:
65- Age	link:65:
66- Visit 1 the Exploratory case study.	link:66:
67- Visit 2 the Explanatory case study.	link:67:
68- Social events.	link:68:
77- Number of interviews.	link:77:
78- Manager.	link:78:
80- (O) External influence stability	link:80:
81- (P) External influence resistance	link:81:
82- (Q) External influence change	link:82:
83- (R) internal influence stability.	link:83:
84- (S) Internal influence resistance	link:84:
85- (T) Internal influence change	link:85:
86- (U) Stability influence resistance	link:86:
87- (V) Stability influence change	link:87:
88- (W) Resistance influence stability	link:88:
89- (X) Change influence stability	link:89:
90- (Y) Stability influence stability	link:90:

## Appendix 8.4: An example of linking questions to answers from different sources of evidence

(See my thesis p. 143)

The Table below is an example of linking the data to two themes. The first theme is build from the interviewees' responses, while the second them is developed from the literature, Burns and Scapens' (2000) framework, and the 1<sup>st</sup> empirical work. The second theme focuses on the relationships between external and internal factors that influence the behaviour of employees, change and resistance.

### An example of linking questions to answers from different sources of evidence

	Column 1	Column 2	Column 3
Row 1	Evidence	35- What influences training or development within the company? Is this sufficient for your needs?	Codes
Row 2		No. Training is not effective.	1
		Yes. Training is effective.	2
		I do not need training.	3
Row 3		External influence stability	O
		External influence resistance	P
		External influence change	Q
		Internal influence stability	R
		Internal influence resistance	S
		Internal influence change	T
		Stability influence resistance	U
		Stability influence change	V
		Resistance influence stability	W
		Change influence stability	X
		Stability influence stability	Y
			Z
Row 4	FM1		2S
	C1MAcc1		1RSU
	C1MAcc2		32US
	C1Acc3		
	C1Man1		
Row 5	C2Acc5		1z
	C2MAcc6		2Z1
	C2Acc7		
	C2Acc8		12
Row 6	Annual report of listed company		2ZQT
Row 7	Newspaper of listed company		1z
Row 8	Direct observation of both companies		2

(Row 1, Colum 2) shows the question asked: 'What influences training or development within the company? Is this sufficient for your needs?'. (Row 2, Column 2) shows the first theme, which is the main answer from the interviewees. (Row 3,

Column 2) shows the second theme, which are the expected relationships to stability, change and resistance. (Column 1) highlights different sources of evidence including that from: interviews within the private company (Row 4, Column 1); interviews within the listed company (Row 5, Column 1), the listed company's website (Row 6, Column 1); the listed company's in-house newspaper, and its annual report (Row 7, Column 1); Direct observation of both companies (Row 8, Column 1). (Row 1, Column 3) shows the codes of the two themes.

The first theme(Row 2, Column 2) is built from interviewees' responses from each of the two cases. The code appears in the table in (Excel) and in the data management software (EndNote), in order to find the information easier to better enable analysis. For example, the answer of C1FM1 is 'Yes. Training is effective'. The answer was linked to training for the new ERP system. Employees had two months of training. Moreover, C1FM1 indicates employees get enough training for ERP, but employees need other types of training including English language and computer. Furthermore, C1FM1 indicates that the top management refused to provide basic courses for employees or even for some managers who have worked for the company for sixteen years.

Therefore, in Excel I type '2'and 'S' on the fourth column next to 'C1FM1'. '2' means 'Yes. Training is effective' and 'S' means 'Internal influence resistance'. In (EndNote) I wrote 'link:35:2': '35' refers to question number 35; 'link:35:2' means Yes (Training is effective) and 'link:35:S' means 'Internal influence resistance'.

The codes are important on the analysis. For example, the codes on Excel could be entered in SPSS to analysed or can be analysed manually to show the agreement and disagreement between respondents on the influences on change and resistance. Moreover, the codes on EndNote is helpful, because the information can be gathered easy and fast. For example, search in EndNote for 'link:35:1' will show every response

that means 'No. Training is not effective'. More importantly, search in EndNote for ':S' means 'Internal influence resistance' for all responses including question number '35'.

Therefore, codes help to analyse data in quantity in (Excel) and find the data easy and fast in (EndNote). Also, codes help to arrange the responses according to the theme which is build and develop during the case study, but not according to the question of interviews which simply a descriptions of the answers. I found using codes minimize some of the weakness of case study that is mentioned above by Dubois and Gadde (2002).

Table above demonstrates how I have interpreted Yin's (2009) discussion enabling me to create a means of analysis and hence the Table. Table shows the principles provided by Yin (2009), which are addressed by all evidence and include most important aspects of the investigation, namely 'how the change or resistance happens and why'. This is located in the second part of the theme.

The questions I asked the interviewees were to investigate the factors that influenced the behaviour of employees to resist or change (See: Appendix 2 2<sup>nd</sup> empirical work: Interview Questions in English). Understanding the actual causes of resistance to change can help to determine which causes actually influence the acceptance of, or resistance to, an ERP system. By so doing, a company can understand which of these causes it can control and which it cannot.



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